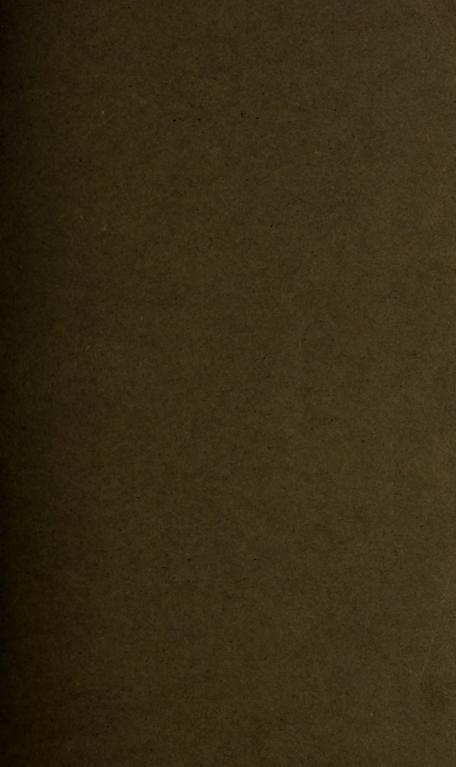
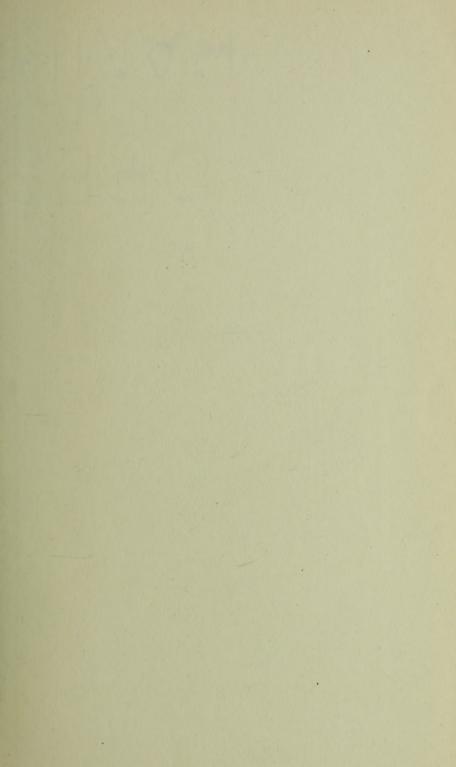


agricultural and Mechanical College.







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CATALOG



# Oklahoma Agricultural & Mechanical College



1915 1916

STILLWATER, OKLAHOMA

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# OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

# TWENTY-FOURTH ANNUAL CATALOG

1914-1915

WITH ANNOUNCEMENTS FOR 1915-1916

STILLWATER, OKLAHOMA

# CHART OF OKLAHOMA A. & M. COLLEGE WORK

II

\* . . . .

1. Complete Courses of In-

VETERINARY MEDICINE
COMMERCE AND MARKETING....
BUSINESS TRAINING
FINEDE COURSES FOR

...

HOME ECONOMICS SCIENCE AND LITERATURE

AGRICULTURE ENGINEERING

SCHOOL OF EDUCATION

. . . . . . . .

struction ..

Agricultural and Mechanical

College

Oklahoma

The College, after twenty-four years of development, officers, a group of fourteen brick and stone buildings, a science equipment costing more than a quarter of a mil-Total value of buildings.

consists of 105 teachers and

ion, and 1,000 acres of land. \$889,749.00

Agricultural Experiment Station tests and free publications.

EXTENSION WORKERS

COTTON GRADERS

DAIRYMEN TEACHERS

FARMERS ENGINEERS

Scientific research in behalf of Agriculture, and publishing results.

other at Farmers' Institutes and Lectures meetings. Lectures at Teachers' Normals and Insti-tutes, and publishing special literature.

Organizing Boys' and Girls' Clubs at home for the study of Agriculture, Domestic Science and related subjects.

Supplying lecturers and technical literature on Road Building, Testing Building Material, County Fair Judges, etc.

The Outside Work for the People of the State .... OR 4 H
OKLAHOMA A. & M. COLLEGE

# COLLEGE CALENDAR

# 1915

September 6, Monday-The First Semester Opens.

October 11, Monday—Short Course in Agriculture and Home Economics Opens, and Extension Specialists' Courses Open. November 25, Thursday—Thanksgiving Day, a Holiday. December 18, Saturday—Christmas Holidays Begin.

### 1916

January 3, Monday-Work of First Semester Resumed.

January 10, Monday—Farmers' Week Opens.

January 21, Friday-First Semester Closes.

January 24-25, Monday and Tuesday—Registration.

January 26, Wednesday—Second Semester Opens.

March 11, Saturday—Short Course in Agriculture and Home Economics, and Agricultural Extension Closes.

Easter Vacation Begins Friday Morning Before Easter Sunday and Closes Monday morning After Easter.

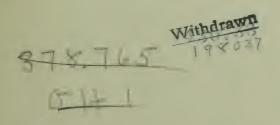
May 21, Sunday—Baccalaureate Sermon.

May 22, Monday—Summer Semester (including Summer Normal and Business Courses) Opens.

May 26, Friday—Commencement Day; Second Semester Closes.

July 29, Saturday—Summer Session Closes.

(The Faculty reserves the right, without further notice, to modify any announcement made in this catalog, if circumstances render such change necessary, and in any event they will be bound by it for only the year following the date of publication.)



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(A. M., University of Missouri)

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be chosen at the A. and M. C. Date					(Postoffice) , having attend	(Postoffice) having attended 1-2-3-4 years, and was graduated	tended 1-2-3-4 years, and was graduated	pradi	lated
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Date	College							<u>.</u>	
			191	-					Principal.
SUBJECT	TEXT	No. of weeks.	No. of Deriods Grade.	Grade.	SUBJECT	TEXT	No. of weeks.	No. of periods per wk.	Grade.
English (State kind of work done) 1st year 2d year 3d year 4th year Estimate Language (State kind of work done) Beginning Latin Caesar, books Cicero, orations Virgil, books Beginning Greek Kenophon, books					Social Science  General History Ancient History Medieval History Modern History American History Okla. Hist. & Civics Civil Government Civil Government Civil S. Constitution Economics Sociology Vocational Subjects				

be chosen at the A. and M	19	school) Ourse	in				will probably
Date			191				Principal.
SUBJECT	TEXT	No. of weeks.	No. of periods per wk	Grade.	SUBJECT	TEXT	No. of weeks. No. of periods Grade per wk
English (State kind of work done) 1st year 2d year 3d year 4th year					Social Science General History Ancient History Medieval History Modern History English History American History Okla, Hist, & Civics		
Foreign Language (State kind of work done) Beginning Latin Caesar, books Cicero, orations Virgil, books					Civics U. S. Constitution  Economics Sociology		
Beginning Greek Xenophon, books Homer books Beginning German		ter can propose and the ca			Vocational Subjects (State kind of work done) Agriculture		
Beginning French					Woodwork  Ironwork  Drawing, Freehand		
Mathematics Algebra Advanced Algebra Plane Geometry Solid Geometry					Object		
Adv. Arithmetic  Natural Science  Physiography  Chysics, Recitation  Laboratory  Chemistry, Recitation					Domestic Science		1
Laboratory  Stronomy  Botany, Recitation  Laboratory  Laboratory		:			Bookkeeping Stenography Typewriting Commercial Law Commercial Geography		
Physiology, Recitation Laboratory Biology, Recitation Laboratory					Psychology		

CERTIFICATE OF PREPARATORY WORK

Name

School

Address of Applicant

AND VHOU

THE

LIBRARY JOHN CRERAL Ant

	ical			aphy —	gement
Woodwork	Drawing, FreehandObjectGeometrical Mechanical	Domestic Art	Domestic Science	Bookkeeping Stenography Typewriting Commercial Law Commercial Geography	Psychology Methods and Management Music

The items checked in the list above have been accepted for admission and aggregate

191

Date ..

Upon receipt of this certificate properly filled out, the Registrar will promptly notify the applicant as to standing he will receive. (Signed)

For Committee on Admission

# OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

The Oklahoma Agricultural and Mechanical College is a State and Federal institution of higher and broader learning, offering technical, scientific education to white persons 14 years of age and over, and carrying valuable scientific information to many thousands who can never visit or attend a college.

The service rendered by the A. and M. College to the State is three-fold:

(1) To educate and train in all that relates to applied science, the industries and citizenship, by affording both liberal and technical studies, laboratories, shops and fields for development of character, the mind and industrial efficiency—the College proper.

The A. and M. College consists of seven schools comprising thirty-one departments. These schools offer distinct courses of instruction to those applying for graduation. The Schools of Agriculture, Engineering, Home Economics, Science and Literature, Education, Commerce and Marketing offer the degree Bachelor of Science (B. S.) to graduates, and Master of Science (M. S.) to those completing a post graduate course. The degree of Doctor of Veterinary Medicine (D. V. M.) is offered to those completing the course in Veterinary Medicine.

- (2) To carry forward investigations in agriculture of a research or experimental nature, to learn and disseminate new facts of importance to farmers and the youth of the State—the Agricultural Experiment Station.
- (3) To instruct school teachers, children and citizens living in all portions of the State in the best proven practice of scientific

agriculture, the industries, the sciences and in the broad fields of Home Economics and home building—the Extension Division.

Tuition is free in all courses and departments. The College is supported by the Federal Government and by the State of Oklahoma as a part of the free school system.

# LAWS CONCERNING THE COLLEGE

The A. and M. College owes its origin to a bill offered by U. S. Senator Morrill of Vermont in 1862, which provided funds for one such institution of learning in every State of the Union, and set aside certain public lands from which endowments have come to each of these State and Federal Colleges. Therefore these institutions are known as "The Land Grant Colleges".

This Act of Congress, approved July 2, 1862, gave to each State which accepted its provisions 30,000 acres of Government land for each one of its Representatives in Congress, the proceeds to be applied to the endowment and maintenance of colleges

"where the leading object shall be, without excluding the other scientific and classic studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the various pursuits and professions of life."

Again, in 1887, Congress provided for an Agricultural Experiment Station in connection with each of the Land Grant Colleges:

The First Legislature of the Territory of Oklahoma adopted a resolution assenting to and accepting the provisions of Congress and established the Oklahoma Agricultural and Mechanical College in Payne County, at Stillwater, December 25, 1890.

Congress also provided 250,000 acres of public land as a permanent endowment for the College in the Enabling Act granting statehood to Oklahoma.

The Oklahoma Constitution provides that the State Board of Agriculture shall be the Board of Regents of the A. and M. College in the following:

"Said Board (of Agriculture) shall be maintained as a part of the State Government and shall have jurisdiction over all animal quarantine regulations and shall be the Board of Regents of all State Agricultural and Mechanical Colleges, . ."

The Oklahoma Constitution is the only State Constitution recognizing the fundamental importance of agriculture and domestic science. It declares that—

"The Legislature shall provide for the teaching of agriculture, worticulture, stock feeding and domestic science in the common schools of the State."

According to the laws of Oklahoma "The Agricultural and Mechanical College shall be the technical head of the Agricultural, Industrial and allied Science system of education in Oklahoma".

# SOURCES OF REVENUE

The 'Agricultural and Mechanical College derives support from both Federal and State Governments:

- 1. A fund derived from the United States Government that may be used for certain forms of class instruction in the College, known as the "Morrill Fund". This fund can be expended only for instruction of students in literature, languages, the sciences, and, by recent amendment, to prepare school teachers in the principles of agriculture and home economics.
- 2. The United States Government funds for investigation of scientific and agricultural matters of importance to farmers, and for publishing the results of such tests and experiments, known as the Hatch and Adams Funds. These support the Oklahoma Agricultural Experiment Station.
- 3. A fund derived from the rentals of public lands donated by Congress to the Oklahoma A. and M. College under the Enabling Act granting statehood to Oklahoma, known as the "Land Lease Fund". This fund may be used for operating expenses of the College proper.
- 4. A fund appropriated annually or biennially by the State for buildings, repairs and extensions to the permanent equipment of the A. and M. College.

5. The Smith-Lever Bill, adopted by the Sixty-third Congress, provides increasing support for cooperative agricultural extension work for a period of ten years, when the permanent basis of this support is reached. This fund is dependent upon cooperative support by the State and is available only for agricultural extension work.

# INSTRUCTION FOR TEACHERS

The A. and M. College prepares teachers of science, of the industrial subjects and of related common branches.

The First State Legislature created the Chair of Agriculture for Schools in the A. and M. College,

"whose duty it shall be to direct and advise in all matters relating to the teaching of agriculture and allied subjects in the common schools, . . . . He shall visit the schools, the teachers' institutes, the summer normal schools and the State Normal Schools, advise with the teachers and officers concerned, . . . and shall distribute such leaflets and other literature as may be helpful to teachers and pupils concerned or engaged in teaching industrial, practical and scientific subjects."

# The law also states that:

"the Agricultural and Mechanical College, its President, professors and employes shall lend such assistance in carrying out the objects, aims and purposes of the State Constitution regarding the teaching of agriculture and allied practical subjects as shall not conflict with the immediate duties incumbent on them in said institution."

The School of Education.—To supply the State with trained teachers in industrial subjects, as contemplated by existing State laws, a School of Education is maintained.

# Section 206, School Law of 1913, says:

"After January, 1916, no person shall receive a third grade certificate unless he shall have had either academic training equivalent to one year in an approved high school of this State, or have had at least ten weeks' professional training in one of the Oklahoma State Normal Schools, State University or A. and M. College, or an institution in this State, or other State, having equivalent teachers' professional course; and no person shall receive a second grade certificate unless he shall have had academic training equivalent to two years in an approved high school of this State, or have had at least twenty weeks' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or other institution having equivalent to three years in an approved high school of this State, or have had at least thirty-six weeks' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or an institution having equivalent teachers' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or an institution having equivalent teachers' professional courses."

The Summer Normal.—To further supply the demand in Oklahoma for trained teachers, the A. and M. College conducts

a complete summer normal institute for teachers. Members of the College Faculty are available as instructors, and specialists of note are also employed to assist in making the instruction of greatest value. Attendance upon the summer term assures full credit for training demanded under Section 206 of the School Law quoted above.

# LAND, BUILDINGS AND EQUIPMENT

The A. and M. College campus and farm embrace a tract of 1,000 acres.

The present buildings were erected by the State at a cost of \$529,716.86, and they are equipped with the latest and best appliances and scientific apparatus, representing an outlay by the State and Federal Governments of approximately \$300,000. All buildings are steam heated, electric lighted, and have sewer connections.

Engineering Building.—Erected 1912. Cost \$74,994.50. Three stories. Covers 160 by 80 feet. Reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories and boilerroom, the electrical laboratory, the civil engineering laboratories for testing cement, masonry and steel, rooms for surveying instruments, storage-batteries, standardizing room, men's locker room, and offices. On the next floor are the engineering library, the physical laboratory and lecture room, four other lecture rooms for the various departments, and rooms for photometry, physical apparatus, stock and women's lockers. On the top floor are the quarters for the Department of Architectural Engineering, consisting of a lecture room, library and reading room and large drafting room. There are also on this floor four drafting and lecture rooms for the use of other departments, rooms for records and offices for instructors.

Shop Building.—Erected 1912. Cost \$4,420.00. Stone and brick building. Forty by 200 feet; for a depth of 80 feet it is two stories high, and the balance one story. Constructed mainly by student labor and of materials from the old shop. Provides accommodations for the carpenter, machine and blacksmith shops and foundry, and has up-to-date tool rooms, etc., complete.

Heating Plant.—Erected 1912. Cost \$40,000.00. Furnishes heat and light for all College buildings and power for the shops.

Chapel Building.—Erected 1912. Cost \$84,075.28. Covers a ground area of 97 by 150 feet. Reinforced concrete and brick with stone trimmings. Sloping floor and large balcony. Roomy stage, with dressing rooms and accessories. Seating capacity 2,500.

Woman's Building.—Erected 1910. Cost \$62,000.00. Contains gymnasium, dining hall and kitchen, reception hall, parlor, classrooms for domestic science and domestic art, and living rooms for the accommodation of girl students. Rooms are electric lighted, steam heated, and all halls are equipped with lavatories and baths. The dormitory is under supervision of a matron.

Boys' Dormitory.—Erected 1910. Cost \$25,000.00. Brick construction. Three stories. Equipped with all modern conveniences.

Chemistry Building.—Erected 1898. Cost \$12,000.00. Twostory brick structure with basement. Main portion 64 by 42 feet, wing 54 by 32 feet. Houses chemistry laboratory of the Experiment Station, classrooms and laboratories for instruction in agricultural and general chemistry.

Library Hall.—Erected 1901. Cost \$48,417.42. Brick and stone building, two stories and basement, 76 by 72 and 111 by 65 feet. It is used in addition to accommodation of library and reading rooms, for the Departments of Zoology and Veterinary Medicine, Drawing and Art work, with lecture rooms, toilet rooms, etc., in the basement.

Central Building (the original building of A. and M. College).—Erected 1892. Cost \$25,000.00. Two-story brick and stone building with basement, 66 by 60 feet. Used for classrooms and printing plant.

Morrill Hall.—Erected 1906. Cost \$74,600.00. Three stories. Brick and stone construction, 76 by 166 feet. Named in honor of Senator Justin S. Morrill, by Act of the Legislative Assembly providing for its construction. Contains quarters for administration and business offices of the A. and M. College and Agricultu-

ral Experiment Station, and lecture rooms and laboratories for the Departments of Animal Husbandry, Horticulture and Botany, and Entomology.

Dairy Building.—Erected 1904. Cost \$7,947.74. Brick structure of two stories, 60 by 30 feet, and one-story addition of 50 by 32 feet. Contains classrooms, laboratories, and a commercial creamery for experimental and instructional purposes.

Agronomy Building.—Erected 1906. Cost \$11,182.91. Two-story brick building. Soil and crop laboratories, classrooms, farm machinery laboratory, etc. Gymnasium occupies one wing of building.

Livestock Judging Pavilion.—Erected 1910. Cost \$15,239.93. Two-story brick structure, affording accommodations for study of the fine livestock owned by the College. Contains classrooms in addition to an amphitheater with a seating capacity of 500, and an arena 50 feet square.

Old Engineering Building.—Erected 1902. Cost \$8,000.00. Brick and stone structure of two stories and basement. Occupied by Departments of Music and Business Training.

Greenhouse.—Erected 1909. Cost \$5,000.00. Part of the equipment of Department of Horticulture and Botany.

Poultry Plant.—Main building for laboratories and class-rooms was built in 1913 and cost \$2,978.00. In addition the plant comprises more than a score of colony houses and a complete equipment.

Apiary and Insectary.—Erected 1913. Cost \$1,936.30. Houses laboratories for Entomology and beekeeping. Cupola is fitted with modern insect trap to aid in study of winged insects.

Barns.—Brick barn, 60 by 96 feet, cost \$7,500.00; dairy barn, cost \$8,000.00; sheep barn, \$8,000.00; hog barn, \$1,000.00; veterinary barn, cost \$2,402.35.

# REQUIREMENTS OF ADMISSION

All persons who desire to enter any School of the College should make application to the Registrar as early as possible before the opening of the first or second semester. Those who desire to be admitted by certificate should make application as soon as possible after their graduation from the high school. To all applicants a blank will be furnished which they are expected to fill out and file with the Registrar in advance of entrance. This certificate must give in detail, concerning each subject which the applicant has studied in the school, the length of time in weeks, the number of recitations per week, and the grade or mark indicating his proficiency. Upon receipt of this certificate a permit to register will be sent the applicant by the Registrar in advance of his coming in September. This will greatly facilitate the work of entrance. The student will present this permit at the registration room and will not be compelled to wait his turn to meet the Entrance Committee.

# Degree Courses

Applicants for admission to the degree courses should be 16 years of age or over and of good moral character. They will be required to present 15 units of entrance credits for admission to the Freshman class. The 15 units required are distributed in the most advantageous way for admission to the various College courses in the Schools of Agriculture, Engineering, Home Economics, Science and Literature, Education, Commerce and Marketing, and Veterinary Medicine, as indicated in the table entitled "Prescribed Units for Admission". One who offers 14 such units will also be admitted as a Freshman, but will be conditioned in 1 unit. Such deficiency must be made up by the end of the second year that the student is in attendance.

	Agri- culture	Engin- eering	Home Econo- mics	Science and Liter- ature	Edu- cation	Com- merce and Mar- keting	Veter- inary Medi- cine
English Algebra Plane Geometry	3 1 1	2½ 1½ 1	3 1 1	3 1½ 1	3 1 1	3 1 1	3 1 1
Solid Geometry* *Science *Poreign Language Social Science Inc. History	1	1 1	I	1	1	1 1	1
***Electives	7 8	71/2	7 8	7½ 7½	7 8	7 8	7 8
Total	15	15	15	15	15	15	15

<sup>\*</sup>Physics required in Engineering and Science and Literature courses.
\*\*German or Latin required in Science and Literature course. German preferred

in the Ergineering course.

\*\*\*To make up the total of 15 units the applicant may use as electives any work satisfactorily completed in high school. A unit is defined to be the work done in an accredited high school or academy in five recitation periods a week for one school year.

# Deficiencies

The courses in the Secondary School of the A. and M. College offered in connection with the College give every needed opportunity for students of the College to make up anything lacking in their preparation for entrance. All such entrance deficiencies must be made up by the end of the second year that the student is in attendance.

# Advanced Credit

Applicants from other institutions of approved standing who offer collegiate courses or professional courses in excess of the requirements for admission will be assigned such advanced standing as may be determined by the Committee on Advanced Standing.

# Special Students

Persons of mature age who do not possess all the requirements for admission and are not candidates for a degree will be permitted to enter any of the courses in the different Schools upon giving satisfactory evidence to the Dean of that School that they are prepared to take advantageously the subjects which they desire. If they desire to take advanced subjects, such as are offered in the Junior and Senior years, they must show special preparation or special necessity for such courses. Persons applying for admission on the above basis are required to present a detailed statement of their preparatory work at the time of their admission.

# Secondary School of the A. and M. College

The minimum age limit is 14 years. Applicants for admission living in towns having high schools must be 16 years of age. Other applicants must pass a satisfactory examination in reading, spelling, penmanship, geography, United States history, grammar and arithmetic.

# **Business Course**

Applicants for admission to the Business Course must have completed eighth grade subjects and be 18 years of age.

# REQUIREMENTS FOR GRADUATION

# Leading to Bachelor's Degree

In all of the four-year courses of study leading to a degree, a student must earn 144 credits, exclusive of any credits given for military science and physical training, before being eligible for a degree. A credit is one hour of theoretical work carried for one semester, two hours of laboratory work being equivalent to two-thirds of a credit. Students are expected, as a rule, to carry 18 hours' credit work per semester, but by special arrangement with adviser and Dean the number taken may be varied from 15 to 20 credits per semester.

# Leading to Master's Degree

- 1. Conditions of Candidacy.—A graduate of one of the Schools of this College, or of another institution in which the requirements for the first degree are equivalent, may become a candidate for the corresponding master's degree by making application on a blank provided for the purpose. The application must be submitted for approval to the Committee on Graduate Instruction and Degrees not later than October 15.
- 2. Nature and Amount of Work.—The minimum requirement shall be twenty-four credits in addition to the thesis, at least one-half to be graduate in character. Not less than twelve credits shall be in the major department.
- 3. Residence.—One year's resident work is required of every candidate who has not received a first degree at this College. Graduates of this College may be permitted in special cases to spend one semester at some other approved institution.
- 4. Examinations.—Final examinations are required upon the completion of each subject.
- 5. Thesis.—A thesis upon some subject connected with the major study is required, unless waived by the committee upon the recommendation of the major professor. This subject must be submitted for approval to the chairman of the Committee on Graduate Instruction and Degrees before November 15. The thesis must cover some line of original research work under the supervision of the major professor and the thesis as a whole must

be approved by the major professor and the Dean of the department. Two typewritten copies of the thesis in specified form shall be deposited in the College library.

- 6. Degrees.—The degrees offered are: Master of Science, M. S.; Master of Science in Agriculture, M. S. Agr., and Master of Science in the respective branches of engineering, e. g., M. S. (C. E.), etc.
- 7. Fees.—Before receiving his degree the candidate shall pay a diploma fee of \$10.00, and any unpaid laboratory fees.

#### COST OF ATTENDANCE

#### Trust Fund

A small fee will be collected at the beginning of each semester to cover actual expenses incident to breakage and use of materials in the various laboratories of the College. This sum will be regulated by the amount found necessary to cover actual cost.

#### Board and Rooms

Furnished rooms in the Woman's Building or in the Boys' Dormitory (including heat, light, water, etc., two students occupying each room) are provided at \$3.00 per month each, payable in advance. Application for dormitory accommodations must be made in writing. Those occupying rooms in dormitories must furnish towels, bed linen and covers. The two dormitory buildings contain bathrooms and all necessary facilities, are thoroughly sanitary, heated by steam and lighted with electricity.

Board in the A. and M. College Dining Hall is provided at actual cost. The cost of such board is about \$2.50 per week, payable in advance. The total cost of supplies and labor is prorated at the end of every month to students boarding in the dining hall.

A copy of the rules governing assignment of rooms and the operation of the A. and M. College dormitories will be sent on application.

Board with room in private families can be obtained for \$3.25 to \$4.50 per week. Furnished rooms, \$2.00 to \$5.00 per month, if two occupy the room.

## Other Expenses

The total cost of attending the A. and M. College courses embraces the items of board, books, clothing and minor incidental expenses of a personal character. These may be safely estimated at \$160.00 to \$200.00 for nine months. Sixty-three percent of the students materially reduce their expenses below the figures given by working in the several departments of the A. and M. College and in the City of Stillwater, and many earn all personal expenses.

## Amount Required to Begin

Those students of limited means desiring to enter the A. and M. College should have some \$75.00 available with which to bear the first items of personal expense and make sure of some months' consecutive study. This amount is estimated for young men to include:

Board and room, two months	36.00
Books, etc.	8.00
Incidentals	5.00
Military uniform—hat, shirt, coat and trousers	17.30
-	
Personal expenses	66.30

With such sum in hand or available the industrious student may by his own efforts secure three or four months, or even a longer period, of study in the A. and M. College. The same estimates will apply to young women if cost of uniform be deducted. Extravagance in all forms is discouraged. Freshmen and Secondary School boys must supply themselves with gymnasium suits costing \$2.00. Girls of the Secondary School, Freshman and Sophomore classes must supply themselves with gymnasium suits costing \$6.00.

## Approved Rooming Houses

Comfortable and desirable homes in Stillwater are listed as "approved rooming houses" for male and female non-resident students by the Faculty Committee on Assignment to Rooms. Students are not permitted to room in other than approved rooming houses.

#### Advisers to Students

To bring about a closer relation between students and members of the Faculty and parents, and for the purpose of safeguarding every interest of the individual student, the A. and M. College has adopted an "advisory system" which applies to all students. A small number of students are assigned to each instructor, who is known as their adviser for the year, and whose duty it is to know each of them personally, and to meet them from time to time. The adviser endeavors to become familiar with the conditions surrounding his students. In many instances he selects studies suited to the student's need or adjusts the student to his work and surroundings. He calls in case of illness and will notify the parents of his visits at such times and of the general welfare and progress of his advisees. Parents should not hesitate to write to advisers or to the President concerning matters that may have to do with the students' comfort and progress in their studies.

#### Care of Health

The health of all students is a matter of chief concern to the officers of the A. and M. College. The rules require that all cases of illness be reported promptly. Two responsible physicians are employed who attend all students without charge in cases of illness or injury received in the line of duty, except cases of major surgery. Sickrooms for the better accommodation of boys and girls suffering from illness are provided, without additional cost, in each of the dormitory buildings.

All students have access to the separate gymnasiums for boys and girls. Games and sports are encouraged for their mental relief and the physical relaxation afforded. These exercises, taken indoors and in the open air, followed by baths, and with the privilege of consultation on matters of personal health afford valuable safeguards to the health of every student who attends the A. and M. College.

## Help

Students are employed on the farm, in the creamery, A. and M. College dining hall, the Printing Department and elsewhere, for which reasonable remuneration is allowed. This, in connec-

tion with other positions about the A. and M. College buildings and grounds, and such opportunities as are offered in the city, has enabled a very considerable number of students practically to make their own way through their college courses. The amount a student can earn depends almost entirely upon his thrift and energy, and the time he can spare from his studies. The rate of pay is 12½ cents per hour for work faithfully performed. Many students are thus assisted and encouraged every year—the preference being given to those whose college work is meritorious. It must not be gathered from this that the A. and M. College engages to afford employment sufficient to enable every worthy young man to complete the course without other resources. With the growth of the institution has come an increased demand for this employment which it is impossible to meet in full. Yet very few students have been compelled to leave College in recent years on account of inability to secure work.

#### GENERAL INFORMATION

The seat of the Oklahoma Agricultural and Mechanical College is Stillwater, in Payne County, a "college town" of 5,000 people, most beautifully and healthfully situated at an elevation of 915 feet above sea level. Payne County was one of the five original counties of Oklahoma Territory and is named for David F. Payne, the noted pioneer, who first settled near the present site of the College. Stillwater citizens and students of the A. and M. College enjoy the advantages of electric lights, telephones, free delivery of mail, a city water system, sewerage, and a very complete system of brick walks shaded continuously by trees.

## How to Reach A. and M. College

Stillwater is on the Santa Fe Railroad (Arkansas City and Pauls Valley branch). The main connections are at Guthrie, Pawnee and Shawnee as follows, according to time tables in effect March 1, 1915:

"From Perry, Enid and the northwest take the Frisco, arriving at Pawnee at 10:30 a. m. Take the Santa Fe at 10:41 a. m. for Stillwater, arriving at 11:40 a. m.

"From Tulsa and the northeast take the Frisco, arriving at

Pawnee at 9:50 a. m. If more convenient, go via Davenport or Cushing. From the east and southeast, arrive at 3:35 p. m. This train leaves Shawnee at 1:00 p. m., passes through Davenport at 2:03 p. m., and through Cushing at 2:45 p. m.

"From the south, southwest and west, reach Oklahoma City to take the 3:35 p. m. Santa Fe northbound, which makes direct connection at Guthrie for Stillwater, leaving Guthrie at 5:30 p. m. and reaching Stillwater at 7:30 p. m."

#### Moral Influences

Eight leading churches are represented in Stillwater and the students are encouraged to attend and participate in their services. As a matter of fact, the Sunday schools and the young people's societies of the several churches in Stillwater are sustained very largely by the students from the A. and M. College.

A Young Men's Christian Association and a Young Women's Christian Association are actively engaged in the numerous and beneficial lines of work characteristic of these organizations among students. These student organizations are not merely helpful to their membership, but exert a wholesome influence on the moral life of the A. and M. College. Social gatherings and entertainments are made to contribute to the moral welfare of the students of both sexes, and these add to the address and composure of those who seek the helpful influences of this institution.

# Grades and Reports

Grades are stated by a system of letters. The semester grade is the average of the daily grade and the grades made in tests, and in making up the final grade for the semester, the semester grade shall count two-thirds and the final examination grade one-third. Reports showing the grades and standing of students are sent to parents and guardians at the end of each semester. Attention is particularly directed to these reports; they are the best indication of the work and standing of the student.

For the information of parents and others, it may be stated that the letter system of grading adopted by the A. and M. College compares with the percentage system about as follows: A grade of A is practically equivalent to a percentage of 95-100, inclusive;

a grade of B corresponds to 90-94 plus; C to 80-89, plus; D to 70-79, plus; E to 50-69, plus; F below 50. A final grade of D or better is necessary to pass in any study.

#### Theses

In some departments a thesis is required for graduation, and in other departments it is elective. Students intending to write theses must select the subject not later than the last week of the first semester, the subjects to be approved by the departments having charge of the work.

## Diploma

Each candidate for graduation in the four-year courses shall deposit with the Registrar \$2.50. Candidates for graduation in the Business course and in the Short Course in Agriculture and Home Economics shall deposit with the Registrar \$1.00 before the student is recommended for graduation.

## Library

The College library consists of all the books belonging to the College, the aim being to centralize all material in one general library. As soon as suitable rooms can be provided the Experiment Station library will be correlated with it. The library occupies four large rooms in the Library Building. Three of these rooms are used as stack rooms, the fourth and largest room making a large and commodious reading and reference room. library is open fourteen and one-half hours a day except Sunday, when it is open from 1:30 to 5:00 o'clock. Formerly the library was open seven and one-half hours. There has been a steady growth in daily attendance from 500 in the fall to a present average daily attendance of 900. The library is classified according to the Dewey Decimal System and indexed in a dictionary card catalog. The library is a depository for all Government publications. Bound volumes in the library in July, 1914, numbered 17,136 volumes. There are now over nineteen thousand bound volumes. Outstanding orders, and the gifts of the Carnegie Institute publications, will swell this number to over 22,000. There are over 50,000 unbound pamphlets in the library arranged by authors and quickly obtainable for reference work. In addition, the library possesses over 50,000 unbound periodicals which are rapidly being bound.

The library receives 492 of the leading newspapers and periodicals of the United States. Eight of the large dailies of the United States are kept on the reading desk for the use of students and most of the magazines indexed in the Reader's Guide are on our shelves.

Purpose.—It is the purpose of the Librarian not only to supplement the work of every department, but also to make the library the center of all literary activity of the College. Every effort is made to assist the students in the use of reference books, catalogs and indexes and to familiarize themselves with the best books and the use of bibliographies.

Valuable Gifts.—The library has been enriched by the gift from the Carnegie Institution of Washington of all their publications, and also by the studies from the Rockefeller Institute of Medical Research. Each of these great institutions has placed the library on the "Omnia list". Other valuable gifts include several thousand periodicals and several hundred books.

Regulations.—Books may be drawn by all the officers and students of the College and by others having special permission. The open shelf system is maintained and the students and the public have access to the stacks at all times. General reference and reserve books, periodicals and other groups of books must be consulted in the reading room and not drawn from the library except at closing time, and must be returned when library opens. Citizens and visitors, whether connected with the College or not, are invited to make free use of the reading and reference room, and assistance in reference work will be gladly given them.

Library Science Course.—In connection with the English Department a course in Elementary Library Science will be offered. This course does not aim to fit students for library positions of any kind, but to familiarize the students in the use of the library and general reference books in connection with their College work. Laboratory work in the library will be given in connection with the lectures and recitations. This course will be a required course for all Freshmen.

## Literary and Other Societies

General literary societies are always active among the students. The Philomathean, the Omega and the Alpha Societies enroll a large percent of the entire student body, and, in addition, a number of clubs and societies have been formed by students specializing in science, engineering, pedagogy, agriculture and domestic science for the purpose of supplementary work and investigation. The Athletic Association has charge of all local College sports, the "Tug-o'-War" and Field Day exercises, and of the interests of the institution in the interscholastic and intercollegiate meets. The Oratorical Association has charge of the representation of the A. and M. College in the preliminary intercollegiate oratorical contests.

#### Of Interest to Girls

About one-third of the students of the Oklahoma Agricultural and Mechanical College are young women. All courses are open to them except Veterinary Medicine.

The course in Home Economics is of great practical value to young women because it is carefully arranged to give science with \* practice in the best possible proportion and order.

In order to meet the demand for a more general course, the "Science and Literature" course has been established. This course will be found to be especially adapted to the needs of young women desiring higher education in literature, languages, history, etc., and offer training in music, elocution and domestic science.

A complete teacher-training course is offered by the School of Education to those who desire professional training for teaching in high schools and colleges. A State life certificate is awarded those graduating in this course.

# Athletics, Military Drill and Discipline

The constant purpose of the A. and M. College is to develop "sound minds in sound bodies" and to train the moral faculties. Clean sports and games on the field cultivate the mental and moral sides of the individual as well as the physical side, while affording needed occasion for relaxation and the repair of mus-

cular and nerve tissues. Ball games and track athletics are encouraged by the A. and M. College authorities.

The Gymnasium for Men is under the supervision of the Physical Director. The exercises in the Woman's Gymnasium are directed by competent lady instructors.

The Northeastern Interscholastic Track and Field Meet is held on the A. and M. College grounds annually, to which the schools of all sections of Oklahoma are especially invited. Twenty schools participated in these events in the spring of 1914.

Baseball and football are provided with suitable grounds, and tennis courts are at the disposal of students.

Military drill is given during the first two years of the College for its physical effects, and as required by the Federal law establishing this and other similar colleges. The good results of this drill are quickly noticed in the improved health and carriage and deportment of those coming under its helpful influence. Young men, especially, need such training to give the erect carriage and strong physique that marks the man of military training.

A commissioned officer of the United States Army is assigned to duty regularly at the A. and M. College as Commandant of Cadets. Instruction in military science is provided for all male students, and infantry drill is given in the field movements and under arms. Arms, accounterments and ammunition have been supplied by the Federal Government. The military discipline is mild but firm, and cultivates habits of punctuality, alertness and the sense of personal responsibility. A rifle club organized by volunteers is an interesting feature of military training.

#### Honor Students

The honor students for the session 1913-14 were as follows: Senior Class

Engineering—Harry Roeser, Perry, Oklahoma.

Domestic Science and Arts—Ella M. Morrow, Perkins, Oklahoma.

Agriculture-R. F. Shiflett, Cruce, Oklahoma.

Teachers' Normal-Inez Harris, Stillwater, Oklahoma.

Science and Literature—Anna Oursler, Stillwater, Oklahoma.

## Junior Class

Engineering—Joseph E. Young, Stillwater, Oklahoma.

Domestic Science and Arts—Mamie Russell, Warner, Oklahoma.

Agriculture—A. Ray Smith, Haskell, Oklahoma. Teachers' Normal—Nina V. Boyd, Hooker, Oklahoma. Science and Literature—Merritt Olmstead, Marshall, Okla-

homa.

# Sophomore Class

Engineering—Walter J. Marsh, Lehigh, Oklahoma. Domestic Science and Arts—Vinita Nelson, Stillwater, Oklahoma.

Agriculture—Chester Kenworthy, Muskogee, Oklahoma. Teachers' Normal—Paul L. Heilman, Wagoner, Oklahoma. Science and Literature—Floy C. Krone, Sparks, Oklahoma.

#### Freshman Class

Engineering—H. B. Hildebrand, Stillwater, Oklahoma.

Domestic Science and Arts—Irma Rapp, Stillwater, Oklahoma.

Agriculture—Roy Hoke, Quay, Oklahoma. Teachers' Normal—Grace Poole, Stillwater, Oklahoma. Science and Literature—Jesse Pickard, Reed, Oklahoma.

# Sub-Freshman Class

Mary M. Winkelman, Sparks, Oklahoma, first. Archie O. Martin, Watonga, Oklahoma, second.

## SCHOOLS OF INSTRUCTION

The Schools of Instruction are planned and grouped to suit the natural needs and desires of the students in attendance at this institution, as indicated by the experience of several years past. Formerly the studies offered by the several departments of the College were grouped in "Divisions". As a result of recent development and change these are now known as "Schools" and their subdivisions are termed "Courses", thus the School of Engineering has its Electrical Engineering course, Mechanical Engineering Course, etc.

Under the present organization the studies of the College are grouped into the following Schools:

- 1. The School of Agriculture.
- 2. The School of Engineering.
- 3. The School of Home Economics.
- 4. The School of Science and Literature.
- 5. The School of Education.
- 6. The School of Commerce and Marketing.
- 7. The School of Veterinary Medicine.

## THE SCHOOL OF AGRICULTURE

W. L. CARLYLE, Dean

#### COURSES OF INSTRUCTION

The following courses of study, designed to meet the requirements of students of the various classes, have been arranged by this department:

## General Course in Agriculture

This course of study leads to the degree of Bachelor of Science (Agriculture), and offers scientific training in agricultural bacteriology, agricultural chemistry, agricultural economics, agricultural education, agricultural engineering, agricultural journalism, agronomy, animal husbandry, dairying, horticulture, entomology, poultry husbandry and veterinary science. In addition to these specific subjects relating directly to agriculture, it embraces a general training in chemistry, botany, bacteriology, zoology, English and other branches which have an application in agriculture and which are designed to give a broad, general education for the man who wishes to devote his time and talent to agricultural pursuits, investigation or teaching.

The field is so broad, however, that it is impossible for any student in four years to take advantage of all the lines of work offered. As will be seen in the curriculum of studies, the work in the Freshman, Sophomore and Junior years is very much the same for all students, giving a maximum of the necessary fundamental studies. The Senior year, however, gives much liberty for selection and for elective studies in the particular branch of agricultural science that the student may be interested in.

# Short Course in Practical Agriculture

This course is designed for young men from the farms of Oklahoma who have not the time nor the inclination to take a regular course in the high schools of the State to be followed by a four-year course in scientific agriculture in this institution, yet who desire a training in the practical application of the sciences of agriculture to the business of farming. It provides a course of study that will give the student a maximum of the agricultural studies relating to farm and livestock work and in addition gives as much of the general studies as may be most useful in training young men to become leaders in their chosen calling on the farms of the State or as teachers of agricultural subjects in the rural schools of the State if the essential preparatory studies have been taken before entering the course.

The course of study includes work in agricultural chemistry, agricultural economics, agricultural engineering, field crops, soils, animal husbandry, including stock judging, and a study of the feeding and care of animals, dairying, horticulture, farm management, poultry husbandry, animal diseases and entomology.

The outline of studies is such as will impart the greatest amount of directly useful knowledge that can be acquired in a brief length of time. The course of study includes three winters' work beginning about the middle of October of each year and ending early in March.

For further details and illustrated circular describing this course, application should be made to the Dean of Agriculture, Stillwater, Oklahoma.

# Short Course in Dairying

The Short Course in Dairying covers one winter's work, beginning at the same time as the Short Course in Practical Agriculture, October 10, and closes early in March.

Opportunities for men who have received special training along dairy lines are increasing each year. The most thorough training that can be had is given by the four-year collegiate course in dairy husbandry. It is realized, however, that comparatively few young men can take such a course. The Short Course in Dairying is offered with the belief that it will prove valuable to those who feel that they cannot complete the collegiate course and yet who desire some special training.

The course is planned to give students the fundamental principles underlying the chief phases of dairying. The testing of

milk and cream, and buttermaking and ice cream making, will be studied both in classroom and in laboratory. The factors governing the successful organization and operation of local creameries will be considered. A study of dairy breeds, the care and management of the dairy herd, silos and silage, feeding the dairy cow, how to secure maximum crops of dairy feeds, and other subjects usually grouped under the subject of dairy management will be given as thoroughly as the time limit of the course will permit. The sanitary production and manufacture of dairy products will receive due attention. A brief amount of time will be devoted to arithmetic in its application to farm dairy and creamery problems.

The following subjects are given:

Milk and Cream Testing
Buttermaking and Ice Cream Making
Dairy Management
Dairy Bacteriology
Dairy Feeds
Dairy Arithmetic and Accounting
Creamery Mechanics.

Illustrated circular describing this course in detail will be sent upon application to the Dairy Department, A. and M. College, Stillwater, Oklahoma.

# One Week Course in Milk and Cream Testing

The dairy laws of the State require that all persons who operate stations where milk or cream is bought on a butterfat basis shall have a reasonable knowledge of how the Babcock test is operated. There is also the requirement that station operators shall know in a general way the factors that influence the quality of the product they are handling.

The Dairy Husbandry Department offers a short course for station operators and for those who intend to operate a station. The work will consist mainly of laboratory work, supplemented by lectures. Emphasis will be given to milk and cream testing. There will be a brief discussion regarding methods of producing and handling sanitary milk and cream. The relation between cream buyer and farmer will be considered, as will also the dairy laws of the State.

Opportunity to take examination for license will be given at the end of the course.

## Agricultural Course for Extension Specialists

This course is designed to educate and prepare men who have had a large and successful practical experience in farming to become extension workers and county agents in the various sections of the State. There is an ever increasing demand for men of this character who have had sufficient scientific training to become leaders in the various counties.

The course will be offered for the first time this year, beginning October 10, 1915, and will continue throughout the winter until early in March, when the course in the College will close, the student being required to do practice work as an assistant county agent during the summer months, coming back in the following October to complete the course, which will end with a certificate in the following March upon the completion of the course. Before a student is permitted to enter this course, he must have had four years of practical experience on a farm and be at least twenty-one years of age.

This course will include work in agricultural economics and marketing, agricultural engineering, agricultural chemistry, agronomy, animal husbandry, dairying, entomology, farm management, horticulture, poultry husbandry and a number of other minor subjects bearing special relation to the practical line of work undertaken by extension specialists.

# Farmers' Course in Agriculture

The Farmers' Course in Agriculture is designed to meet the growing demand on the part of the busy farmer who is actually engaged in the work on his farm and who cannot avail himself of a college course, yet desires the latest information on the various phases of his work on his farm. The course will consist of addresses, demonstrations and exercises covering a period of one week, designed to give busy farmers the most useful instruction and practice in the various phases of field crop culture, stock feeding and management, horticulture, dairying and kindred subjects in the shortest possible time and at a season when they can be away from home for a brief period.

The course opens January 10, 1916, and is given by the Extension Division, the teaching staff and Experiment Station staff of the A. and M. College, assisted by other speakers and specialists. Programs may be had upon application to the Director of Extension, A. and M. College, Stillwater, Oklahoma.

#### TERMS OF ADMISSION

#### General Course in Agriculture

The requirements for admission to this course are stated in terms of units in common with all the other regular courses in the College. The term "unit" means the equivalent of five recitations a week for one year in one branch of study in the secondary school. Fifteen units are required for admission, an allowance of one credit being made, however, where an applicant has completed fourteen units of work in an accredited high school. The fifteenth unit may be made up from the secondary school studies offered in the College.

Applicants will be required to present three units in English; one in social science including history; one in natural science; two in mathematics, which shall be made up of one unit in algebra and one in plane geometry; three academic units, including foreign language, and five additional units shall be elective from vocational, science, or other subjects.

# Admission of Adult Special Students

Persons twenty-one years of age who do not possess all the requirements for admission and are not candidates for a degree or a certificate will be permitted to enter any of the courses in the School of Agriculture upon giving satisfactory evidence to the Dean of the School that they are prepared to take advantageously the studies which they desire. If they desire to take advanced studies, such as are offered in the Junior or Senior years, they must show special preparation or special necessity for such courses.

Candidates applying for admission on the above basis are required to present a detailed statement of their preparatory studies at the time of their admission.

## Short Course in Practical Agriculture

Students in this course must be at least sixteen years of age and have a good common school education. No entrance examinations are required.

## Winter Dairy Course

Students in this course must be at least sixteen years of age and have a common school education. No éntrance examinations are required.

## Agricultural Course for Extension Specialists

The applicants for admission to this course must have had at least four years of practical experience in farm work and farm management, and must be at least twenty-one years of age before being admitted. They must have had a good common school education, and will be required to present an outline of the studies completed before being admitted. No entrance examination will be required.

## Degrees

The degree of Master of Science (Agriculture) will be conferred upon agricultural students who present at least one year of advanced study under direction of the Faculty of the School and present an acceptable thesis on a topic approved by the Graduate Committee of the Faculty.

#### GENERAL COURSE IN AGRICULTURE

The following outline of study represents the required and elective work in the School of Agriculture. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 144 credits in addition to military drill and physical education. The thesis, or substitute work approved by the Dean of the department must represent some phase of the student's work in his major study, for which a maximum of four credits will be given. Before graduation every student in agriculture must have had at least six months of actual farm experi-

ence satisfactory to the Dean of the department.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

## All Courses

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Eng. 101, El. of Com	Credits.  4 4 1-3 3 1-3 2 1-3 3 2-3 1-3	Eng. 102, El. of Com	3 1-3 3 1-3

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEME	STER	
Hours. C	Credits.	7	Hours.	Credits.
Eng. 201, Expos. & Argumentation	2	Eng. 202, Desc. and Narration	2	2
or	2	Fra 204 Mag Weit	2	
Eng. 203, News Writing 2 Chem. 202, Qna. Anal 1 (4)	2 1-3	Eng. 204, Mag. Writ Chem. 206, Agr. Chem.	3 (4)	4 1-3
Chem. 205, Org. Chem. 2 Vet. 209, Vet. Anat 3	2	Vet. 210, Vet. Phys	3	3
or		Bot. 302, Sys. Bot	2 (4)	3 1-3
Bot. 201, Plant Phys 3 Hort. 201, Fruit Grow 3	3	Bot. 202, Genetics Zool. 202, Gen. Zool		3 1-3
A. H. 201, Breeds of	212	Agron. 202, For. Crops	2 (2)	2 2-3
Livestock	3 1-3 3 1-3	Military Science	(3)	
Military Science(3)				

#### Animal Husbandry

#### JUNIOR YEAR

FIRST SEMESTER		SECOND SEMES	TER
Bact. 301, Gen. Bact	3 3 1-3 2 1-3		Hours. Credits. 2 (2) 2 2-3 2 2 3 (2) 3 2-3 2 (2) 2 2-3 1 (4) 2 1-3 2 2
A. H. 303. An. Nutrition 3	3		

#### SENIOR YEAR

	022112026	YEAR
FIRST SEMESTER	a	SECOND SEMESTER
Hours.	Credits.	Hours. Credits.
A. H. 401, Show Yard Judging 1 (6)	3	A. H. 402, Stock Farm Management
Judging	3	Management 2 (2) 2 2-3 A. H. 404, An. Prod., Horses, Swine &
Dairy & Beef Cattle 2	2	Horses, Swine &
	0.1.0	Sheep
Prac. in Teach. Agr 2 (4)	3 1-3	Agr. 401, College & Sta.
A. H. 405, Practicums (4)	1 1-3	Organization & Function
Electives 5 (2)	5 2-3	Agron: 304, Farm Struc-
		Agron. 304, Farm Structures 1 (6) 3
		A. H. 406, Practicums (4) 11-3
		Electives 4 (2) 4 2-3
	Agron	omy
	JUNIOR	•
FIRST SEMESTER	jonion	SECOND SEMESTER
Hours.	Credits.	Hours Credite
Agron. 303, Farm Mo-	Cicaris.	Hort. 304, Plant Breed 2 (4) 31:3 Ent. 302, Gen. Ent 3 (2) 3 2:3 Agron. 302, Soil Fert 2 (2) 2 2:3 Econ. 304, Rural Econ-
tors 1 (4)	2 1-3	Hort. 304, Plant Breed 2 (4) 31-3 Ent. 302, Gen. Ent 3 (2) 32-3
A. H. 303. Animal		Agron. 302, Soil Fert 2 (2) 22-3
Nutrition	3 3 1-3	Econ. 304, Rural Econ-
Nutrition 3 Agron. 301, Soils 2 Econ. 201, El. of Econ. 3	3 1-3	UIIICS
or	3	or Ger. 202, Beginners'
Ger. 201. Beginners'		Course 3 3
Course 4	4	Course
Course	2	Agron, 304, Farm Struc-
Writing2	2	tures 1 (6) 3
Fng 301 Editorial &		
Eng. 301, Editorial & Pub. Work	2	
Bact. 301, Gen. Bact 3 (4)	4 1-3	
	SENIOR	YEAR
FIRST SEMESTER		SECOND SEMESTER
Hours.	Credits.	Hours. Credits.
Agr. Edu., Theory & Prac. in Teach.		Agron. 402, Farm Man 2 (2) 2 2-3 Agr. 401, Col. & Expt. Sta. Organ. & Func-
Prac. in Teach.	2 1 2	Agr. 401, Col. & Expt.
Agriculture	3 1-3	tion
provement		Agron. 406, Soil Survey 1 (4) 21-3
Of		
		Agron. 408, Thesis 2
Agron. 405, Adv. Soils 2 (4)	3 1-3	Agron. 408, Thesis
Agron. 405, Adv. Soils 2 (4) Agron. 403, Cotton Prod. 2 (2)	3 1-3 2 2-3	Agron. 408, Thesis 2
Agron. 407, Thesis 2	3 1-3 2 2-3 2	Agron. 408, Thesis
Seminar	1	Agron. 408, Thesis
Electives 6	6	Electives 5 5
Electives 6	1 6 Dairy Hu	sbandry
Electives	6	sbandry YEAR
Electives 6	1 6 Dairy Hu	sbandry
Electives 6  FIRST SEMESTER Hours.	1 6 <b>Dairy Hu</b> JUNIOR	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER Hours.	1 6 Dairy Hu JUNIOR Credits.	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER Hours. Agron.303, Farm Mo-	1 6 <b>Dairy Hu</b> JUNIOR	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER Hours. Agron.303, Farm Mo-	1 6 Dairy Hu JUNIOR Credits. 2 1-3	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER Hours. Agron.303, Farm Mo-	1 6 Dairy Hu JUNIOR Credits. 2 1-3	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER Hours. Agron.303, Farm Mo-	1 6 Dairy Hu JUNIOR Credits. 2 1-3 3 3 4 1-3	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ. 3  Bact. 301, Gen. Bact. 3 (4)  Dairy. 301, Buttermaking 1 (4)	16 Dairy Hu JUNIOR Credits. 21-3 3 4 1-3 2 1-3	Sbandry YEAR  SECOND SEMESTER  A. H. 304, An. Breed
Electives	1 6 Dairy Hu JUNIOR Credits. 2 1-3 3 3 4 1-3	sbandry YEAR SECOND SEMESTER House Credite
Electives 6  FIRST SEMESTER Hours.  Agron.303, Farm Motors 1 (4) A. H. 303, Animal Nutrition 3 Econ. 201, El. of Econ 3 Bact. 301, Gen. Bact 3 (4) Dairy. 301, Buttermaking 1 (4) Agron. 301, Soils, Phys 2 (6)	16 Dairy Hu JUNIOR Credits. 21-3 3 4 1-3 2 1-3	Sbandry YEAR  SECOND SEMESTER  A. H. 304, An. Breed
FIRST SEMESTER	16 Dairy Hu JUNIOR Credits. 21-3 3 4 1-3 2 1-3 4	SECOND SEMESTER  A. H. 304, An. Breed
First Semester   Hours.	Dairy Hu JUNIOR Credits. 21-3 3 4 1-3 2 1-3 4 SENIOR	Second Semester   Hours. Credits.
Electives 6  FIRST SEMESTER  Hours.  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ 3  Bact. 301, Gen. Bact 3 (4)  Dairy. 301, Buttermaking 1 (4)  Agron. 301, Soils, Phys 2 (6)	Dairy Hu JUNIOR Credits. 21-3 3 41-3 21-3 4 SENIOR Credits.	Second Semester   Hours. Credits.
Electives 6  FIRST SEMESTER  Hours.  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ 3  Bact. 301, Gen. Bact 3 (4)  Dairy. 301, Buttermaking 1 (4)  Agron. 301, Soils, Phys 2 (6)	Dairy Hu JUNIOR Credits. 21-3 3 4 1-3 2 1-3 4 SENIOR	Second Semester   Hours. Credits.
Electives 6  FIRST SEMESTER  Hours.  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ 3  Bact. 301, Gen. Bact 3 (4)  Dairy. 301, Buttermaking 1 (4)  Agron. 301, Soils, Phys 2 (6)	Dairy Hu JUNIOR Credits. 21-3 3 41-3 21-3 4 SENIOR Credits.	Second Semester   Hours. Credits.
Electives 6  FIRST SEMESTER  Hours.  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ 3  Bact. 301, Gen. Bact 3 (4)  Dairy. 301, Buttermaking 1 (4)  Agron. 301, Soils, Phys 2 (6)	Dairy Hu JUNIOR Credits. 21-3 3 41-3 21-3 4 SENIOR Credits. 2	Second Semester   Hours. Credits.
Electives 6  FIRST SEMESTER  Hours.  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ 3  Bact. 301, Gen. Bact 3 (4)  Dairy. 301, Buttermaking 1 (4)  Agron. 301, Soils, Phys 2 (6)	Dairy Hu JUNIOR Credits. 21-3 3 41-3 21-3 4 SENIOR Credits.	Second Semester   Hours. Credits.
Electives 6  FIRST SEMESTER  Hours.  Agron.303, Farm Motors 1 (4)  A. H. 303, Animal  Nutrition 3  Econ. 201, El. of Econ 3  Bact. 301, Gen. Bact 3 (4)  Dairy. 301, Buttermaking 1 (4)  Agron. 301, Soils, Phys 2 (6)	Dairy Hu JUNIOR Credits. 21-3 3 41-3 21-3 4 SENIOR Credits. 2	Second Semester   Hours. Credits.
FIRST SEMESTER	1 6 Dairy Hu JUNIOR Credits. 2 1-3 3 4 1-3 2 1-3 4 SENIOR Credits. 2 2 3 1-3	SECOND SEMESTER
FIRST SEMESTER	Dairy Hu JUNIOR Credits. 21-3 3 41-3 21-3 4 SENIOR Credits. 2	Second Semester   Hours. Credits.

## Horticulture IUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER
A. H. 303, An. Nutrition 3 Agron. 301, Soils	4 3	Hours. Credits. 3 (2) 3 2-3 Bot. 302, System. Bot 1 (6) 3 Hort. 304, Plant Breed 3 (2) 3 2-3 Hort. 302, Veg. Grow 3 (2) 3 2-3 Agron. 302, Soil Fert 3 (2) 3 2-3
Eng. 301, Editorials & Pub. Work	2	
	SENIOR	YEAR
FIRST SEMESTER		SECOND SEMESTER
. Hours	. Credits.	Hours. Credits.
Bot. 401, Special Sys-		Agr. 401, College &
Bot. 401, Special System		Agr. 401, College & Hours. Credits. Expt. Sta. Organ. & Function
Bot. 401, Special System	3 3	Agr. 401, College & Expt. Sta. Organ. & Function Hort. 402, Landscape
Bot. 401, Special System 1 (6) Agron. 304, Farm Struc. 1 (6) Agr. Edu., Theory & Prac. in Teach. Agr 2 (4) Hort. 401, Fruit & Veg.	3 3 3 1-3	Agr. 401, College & Hours. Credits.  Expt. Sta. Organ. & Function 2 (4) 3 1-3  Hort. 402, Landscape  Gardening 3 (2) 3 2-3  Hort. 404, History & Lit.
Bot. 401, Special System 1 (6) Agron. 304, Farm Struc. 1 (6) Agr. Edu., Theory & Prac. in Teach, Agr 2 (4)	3 3	Agr. 401, College & Hours. Credits.  Expt. Sta. Organ. & 1-3  Function 2 (4) 3 1-3  Hort. 402, Landscape Gardening 3 (2) 3 2-3

#### DEPARTMENT OF ANIMAL HUSBANDRY

W. L. FOWLER, Professor D. A. SPENCER, Assistant W. L. BLIZZARD, Assistant

The Department of Animal Husbandry gives instruction in those subjects which deal with livestock production. The class work includes the study of the recognized market types and classes and the more popular improved breeds of livestock. A study is made of the feeds available to the stock farmer and methods of preparing and feeding these feeds to obtain the most economical results. The breeding and management of various kinds of livestock are made a feature of the course. A large collection of herdbooks on file in the department are available for class use in the tracing of pedigrees and in the studying of special breeds, strains and families of livestock.

Judging livestock by means of the use of the score card, as well as comparative stock judging, is fully emphasized. The livestock equipment affords an excellent opportunity to study the improved breeds of stock. The purebred stock are represented as follows: Cattle—Shorthorns, Herefords, Aberdeen Augus, Jerseys, Holsteins and Guernseys; Swine—Duroc Jerseys, Poland Chinas, Berkshires, Chester Whites and Tamworths; Sheep—Shropshires, Dorsets and Delaine Merinos; Horses—Percherons, American Saddle Horses and American Trotters.

In addition high class work horses and mules are used as work stock on the farm, and these, together with the animals used in Experiment Station work, are available for practice in livestock judging. More than three hundred head of animals are available for use in instructional work. Practical instruction is given in the care, handling and feeding of livestock, and the subjects throughout are made as practical as possible.

## **SUBJECTS**

102 Market Types of Livestock. Class 2 hours; practice in judging 4 hours. Credit  $3\frac{1}{3}$ .

This course consists of a study of the market types, classes and grades of horses, cattle, sheep and swine.

Text: Livestock, Jno. A. Craig; bulletins.

201 Breeds of Livestock. Class 2 hours; practice 4 hours. Credit 31/3.

The characteristics of each breed of horses, cattle, sheep, swine, and jacks are considered at length. Each breed is discussed with reference to its origin, history, development and adaptation to American conditions. Much emphasis is put on the practical work in judging representatives of the various breeds according to the standards set by the show ring.

Text: Types and Breeds of Farm Animals, Plumb.

301 Pedigree Work. Class 1 hour, laboratory 2 hours. Credit 1/3.
Prerequisite: Animal Husbandry 201.

A study of herdbooks and pedigrees to acquaint students with the leading strains and families of horses, cattle, sheep and swine.

302 Stock Judging. Class 1 hour, practice in judging 4 hours. Credit 21/3.

Prerequisite: Animal Husbandry 102, 201.

A practical course aimed to train the student to become proficient in livestock judging. The first part of the work consists of the use of the score card as applied to the different types and breeds. The major portion of the work is done by the method of comparative judging, using rings of from three to five animals.

Text: Principles and Practice of Judging Livestock, C. W. Gay.

303 Animal Nutrition. Class 3 hours. Credit 3.

Principles of animal nutrition; composition and digestibility of various feeds; balanced rations; economical feeding of animals for various purposes.

Text: Feeds and Feeding, Henry and others.

304 Animal Breeding. Class 3 hours. Credit 3.

Required of Juniors in Animal Husbandry and Dairying.

A study of the principles of animal breeding and its practical application. Special study is made of inbreeding, crossbreeding grading and practice of successful breeders.

Text: Principles of Breeding, Davenport and others.

401 Show Yard Judging. Class 1 hour, practice in judging 6 hours. Credit 3.

Prerequisite: Animal Husbandry 102, 201, 302.

This course deals with the judging of market classes as well as the different breeds of purebred stock. During the work of the term, occasional trips are made to the best livestock farms of the State, where the students have an opportunity to judge and to observe the management of herds and flocks. Students are urged to attend county and State Fairs to observe the judging of livestock. Required of students who are candidates of judging teams.

**402 Stock Farm Management.** Class 2 hours, laboratory 2 hours. Credit 23/3.

Prerequisite: Animal Husbandry 201, 305, 306.

A course dealing with the purchase, organization, equipment and management of different kinds of livestock farms, with reference to financial returns; buying, selling and marketing of livestock; crops for pasture, etc.

403 Animal Production—Dairy and Beef Cattle. Class 3 hours. Credit 3.

Prerequisite: 201, 305, 306.

A study of the most practical and scientific methods of producing, feeding and managing dairy and beef cattle.

404 Animal Production—Horses, Swine and Sheep. Class 3 hours. Credit 3.

Prerequisite: 201, 305, 306.

Studies of the most practical and scientific methods of producing, feeding and marketing horses, swine and sheep.

405 Practicums—Practice in Feeding and Handling Livestock. Laboratory 4 hours. Credit 1½.

Prerequisite: Animal Husbandry 305, 306.

Practical feeding and managing of horses, beef cattle, dairy cattle, sheep and swine is given in the barns, and each student is required to do the scheduled amount of this kind of work. Drill is given in the grooming, feeding, care, management, fitting and training for show and exhibition purposes. The aim of the course is to aid the student to become a thoroughly practical and expert stockman.

406 Practicums-Practice in Feeding and Handling of Livestock.

Laboratory 4 hours. Credit 11/3.

Prerequisite: 305, 306.

A continuation of Animal Husbandry 405.

407 Seminar. Class 1 hour. Credit 1.

Prerequisite: All Animal Husbandry work up to Senior year.

The object of the course is to train the student to do independent work and develop the spirit of research. Special subjects and assignments are given to each student. Round table discussions are held each week, and at that time the students are given an opportunity to present their views along the line of work they are pursuing.

408 Advanced Dairy Judging. Class 1 hour, judging 3 hours. Credit 2.

This course is arranged especially for the purpose of giving dairy students actual practice in judging dairy cattle. The College herd, together with other herds in the vicinity of the College, will be used for judging purposes.

#### DEPARTMENT OF AGRONOMY

M. A. BEESON, Professor R. E. KARPER, Assistant in Crops Adrian Daane, Assistant in Soils

The course in agronomy is designed to familiarize the students with the principles underlying productive soils, plant growth, farm management and rural engineering. It offers practical training in these modern fields of science, preparing young men to successfully solve the problems of the farm life and fitting them for educational and research work.

The general field and experimental plots of the Experiment Station used for breeding and testing farm crops and for conducting experiments in methods of soil management afford the student excellent opportunities for study and investigation.

The large, well equipped laboratory for soil physics and soil fertility work is maintained for the regular use of students.

A research laboratory is well supplied with necessary apparatus for the use of the instructors and advanced students in doing research work.

The crops laboratory is well equipped with material and specimens for a detailed study of the different cereal, forage and fiber crops.

The following are detailed descriptions of courses offered in lecture rooms and laboratories:

# **SUBJECTS**

201 Cereal Crops. Class 2 hours, laboratory 4 hours. Credit 31/3.

A study of the origin, history of development and the factors influencing the growth of the various cereal crops. The characteristics, adaptation, preparation of the seedbed, culture and uses of the most important cereal crops are studied.

202 Forage and Fiber Crops. Class 2 hours, laboratory 2 hours. Credit 23/3.

A study of the history, development, growth, distribution, culture and uses of the forage and fiber crops. Annual and perennial grasses and forage crops, including legumes, cereals and sorghums, are studied with special reference to their culture, adaptation, production and uses. In the laboratory a study is made of the different seeds with special reference to their identification, quality and purity.

401 Crop Improvement. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

Prerequisite: Agron. 201, 202.

This is an advanced course in cereal and forage crops, dealing with factors affecting management, improvement and breeding. The laboratory is partly devoted to the collection, reading and classification of material concerning cereal and forage crop improvement.

403 Cotton Production. Class 2 hours, laboratory 2 hours. Credit  $2\frac{2}{3}$ .

Varieties, methods of selection, planting, culture, harvesting and marketing of the cotton crop will be considered in detail. The laboratory work consists of testing fibers and grading, together with field work.

301 Soils. Class 2 hours, laboratory 4 hours. Credit 31/3.

A general introductory course dealing with the origin, formation, composition and classification of soils; the physical properties of the soil, and the relation of these to soil moisture, heat and air; the liberation of plant food; soil erosion; alkali soils.

302 Soil Fertility. Class 2 hours, laboratory 2 hours. Credit 2%. Prerequisite: Agron. 301.

The relation of the plant to the soil. The influence of fertility on the yield of various crops; the influence of the various crops upon the fertility of the soil; rotation; effect of different systems of farming upon fertility and productiveness of soils; manures and fertilizers.

405 Advanced Soils. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Agron, 302.

This course takes up advanced work in soil physics and analytic work of the important soil ingredients. A study is also made of the particular problems connected with dry farming, alkali and acid soils.

406 Soil Survey. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Agron. 405.

Soil identification, field study of the methods of mapping soils and practice in soil mapping.

402 Farm Management. Class 3 hours, laboratory 2 hours. Credit  $3\frac{2}{3}$ .

Prerequisite: Agron. 201, 202, 302.

The purpose of this course is to assemble and correlate the principles involved in the successful management of a farm. Study is made of points to be considered in the selection of the farm, types of farming, planning and arrangement of the farmstead and of the fields and crops; of the cost of producing and methods of marketing different farm products. The relation of the size of farm to profits; the relation of livestock to crop production and maintenance of permanent agriculture receives consideration.

At the beginning of the course the student is required to furnish the layout and inventories of his own farm or of a farm with which he is familiar, together with a financial record of a year's actual operation. Whenever practicable, neighboring farms are visited, with the idea of securing first hand information as to the layout of a farm and arrangement of the farmstead and the type of farming.

Text: Farm Management, Warren.

407 Thesis. Class work and laboratory to be arranged.

A course dealing with special research problems assigned for study.

408 Thesis. Class work and laboratory to be arranged.

A continuation of the work already begun in course 405.

#### DEPARTMENT OF DAIRY HUSBANDRY

J. M. FULLER, Professor C. A. BURNS, Assistant CHAS. P. UNWIN, Foreman of Factory

The Dairy Building is a two-story brick structure 60x30, with a wing to the rear 50x32 feet.

The first floor of the new wing is used as a demonstration creamery and buttermaking department, which furnishes an opportunity to students for investigation of practical and scientific problems in buttermaking.

Parts of the first floor of the main building are equipped with ice cream machinery, cheesemaking apparatus and different makes of cream separators for the purpose of instruction and demonstration work.

Several of the rooms on the second floor are used for lecture and laboratory work. These laboratories are equipped with such apparatus as is necessary for the more practical analyses of commercial dairy products. A limited supply of chemicals and glassware for dairy bacteriology investigation is also furnished.

## SUBJECTS

101 Elements of Dairying. Class 3 hours, laboratory 2 hours. Credit 33/3.

This course gives the student a broad survey of the field of dairying. As the title suggests, the course is somewhat elementary in nature and will include a study of the secretion of milk, the Babcock test, farm buttermaking, farm separators, production of sanitary milk, cow test associations, advanced registry testing, and the like.

301 Buttermaking. Class 1 hour, laboratory 4 hours. Credit 21/3.

This course gives the student a practical as well as a scientific knowledge of the subject. The laboratory work is done in the commercial creamery rooms of the College under the immediate supervision of the commercial buttermaker. Class work consists of lectures and textbook study of such subjects as pasteurization, starters, moisture control and churning.

302 Milk Production. Class 3 hours. Credit 3.

Consists in a thorough study of the best methods of handling dairy cattle, breeding, feeding and improving standards of production, dairy herds, dairy buildings, general equipment, care and management of dairy farms, etc. Frequent reference will be made to bulletins and dairy papers.

401 Milk and Cream Testing. Laboratory 6 hours. Credit 2.

This course is scheduled for six hours work weekly with the time divided between lecture room and laboratory. Takes up not only the more practical side of testing, but also includes such subjects as calibration of glassware, causes for variation of tests, why cream patrons become dissatisfied, together with a brief study of the components of milk.

## 403 Dairy Organizations and Marketing. Class 2 hours. Credit 2.

Gives the student a general knowledge of successful dairy organizations, both in the case of the producer and manufacturer. Cow test associations and their relation to higher standards of production, community breeding, cooperative creameries, and cooperation in marketing dairy stock and dairy products, are among the main subjects that will be considered.

#### 405 Cheesemaking. Class 2 hours, laboratory 6 hours. Credit 4.

The work given covers such subjects as methods of producing and handling milk for cheesemaking, the manufacture of cheddar and other cheese, a study of the chemical and bacteriological changes which take place during the ripening process, and the construction and management of cheese factories. Among the varieties of cheese that will be manufactured are cheddar, brick, gouda, pimento and cottage cheese.

402 Advanced Dairying. Class 3 hours, laboratory 2 hours. Credit  $3\frac{2}{3}$ .

Consists of recitations and lecture work in which systems of dairying in European countries are compared with systems of dairying in the United States. The history and development of the dairy industry and dairy legislation will also be studied. Laboratory work will consist of the testing of commercial dairy products to determine whether or not State and Federal standards have been observed.

404 Dairy Technology. Class 1 hour, laboratory 6 hours. Credit 3.

Includes a study of ice cream, condensed milk, casein and other dairy products. Butter will be tested for salt, moisture and fat, and ice cream for fat. Part of the time will be spent in the manufacture of plain and fancy ice creams, sherbets, etc.

#### 406 Seminar. Class 1 hour. Credit 1.

Each student will prepare a thesis on a dairy subject, arranged in outline form at the beginning of the semester after consulting with the instructor. Students will be given the privilege of writing and reporting on dairy subjects of special interest to them. Summary of certain bulletins will be required.

#### DEPARTMENT OF HORTICULTURE

N. O. BOOTH, Professor L. G. HERRON, Assistant

This department occupies rooms in Morrill Hall. Although it lost much in the way of valuable equipment in the disastrous fire which destroyed Morrill Hall on August 7, 1914, this equipment is being rapidly replaced, and will be thoroughly up-to-date in every respect.

Ample laboratory and field facilities are provided for every sort of student instruction. There is a complete line of the garden and field tools used in fruit and vegetable growing. Approximately twenty-seven acres of the College farm is devoted to orchard and garden purposes. These plantations provide ample

material for all laboratory and classroom instruction. Cellar and greenhouse facilities are also ample for purposes of instruction in nursery work and floriculture.

## **SUBJECTS**

102 Nursery Practice. Class 2 hours, laboratory 2 hours. Credit 2\%.

A study of the theory and practice of propagating plants by grafting, budding, layering, cuttings, etc.

Text: Bailey's Nursery Book.

201 Fruitgrowing. Class 3 hours, laboratory 2 hours. Credit 3%.

A systematic study of fruitgrowing from the historical, agricultural and economic standpoints.

Text: Principles of American Fruit Culture, Bailey.

301 Systematic Pomology. Class 2 hours, laboratory 6 hours. Credit 4.

A study of orchard fruits from the economic standpoint.

302 Vegetable Growing. Class 3 hours, laboratory 2 hours. Credit  $3\frac{2}{3}$ .

A study of garden vegetables from the botanical, cultural and nutritional standpoints.

303 Forestry. Class 3 hours. Credit 3.

A study of the general principles of forestry for a nation, and particularly\_Oklahoma. Prairie forestry, its possibilities.

304 Plant Breeding. Class 3 hours, laboratory 2 hours. Credit 3\%.

The principles and practice of selection and crossing as applied to horticultural plants.

401 Fruit and Vegetable Packages and Packing.

A study of the principles of packing as applied to fruits and vegetables.

402 Landscape Gardening. Class 3 hours, laboratory 2 hours. Credit 324.

A study of the principles of landscape gardening, and in particular its application to yards and streets.

404 History and Literature of Horticulture. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

A study of the development of horticulture and its position in agricultural development. Also a systematic study of horticultural periodicals and books.

#### DEPARTMENT OF POULTRY HUSBANDRY

B. A. AHRENS, Assistant Professor, in Charge

Equipment for instruction in poultry husbandry is provided. Flocks of the leading varieties of poultry are maintained, modern poultry houses, incubators, brooders, etc., are in use, and a stand-

ard poultry plant operated, which is available for student instruction.

# **SUBJECTS**

305 Farm Poultry. Class 2 hours. Credit 2.

General course dealing with poultry houses, yards, etc. Fattening and marketing of poultry; description of breeds and varieties of poultry; marketing of poultry; poultry diseases.

306 Farm Poultry. Class 2 hours. Credit 2. A continuation of course 305.

409 Poultry Practice. Laboratory 2 hours. Credit 3/3.

Practice in poultry carpentry; caponizing, killing and dressing; grades of market poultry; candling and grading eggs; ordinary work about a poultry farm; anatomy of birds.

411 Poultry Judging. Laboratory 4 hours. Credit 11/3.

Various breeds and varieties of chickens; origin, history and points of excellence.

408 Incubation, Brooding and Rearing. Laboratory 6 hours. Credit 2.

Each student will operate an incubator and brooder, keeping accurate records of temperatures, etc.

# DEPARTMENT OF FARM ENGINEERING

H. L. THOMSON, Assistant Professor of Farm Engineering, in Charge

The agricultural engineering laboratory is well supplied with representative types of farm machinery for demonstrative and illustrative purposes in farm mechanics. Different makes of all kinds of farm machinery and motors are supplied by implement manufacturers for study and investigation. The department is well supplied with levels and other engineering equipment necessary in irrigation, drainage and road work.

# **SUBJECTS**

101 Agricultural Mechanics. Class 1 hour, laboratory 4 hours.
Credit 21/3.

A general course for all students in agriculture, covering briefly rope-tying and splicing, principles of draft, cultivating, seeding and harvesting machinery, farm power, water supply, elements of leveling, concrete.

303 Farm Motors. Class 1 hour, laboratory 4 hours. Credit 21/3. Prerequisite: Agron. 101.

A study of the working principles, operation and costs of the various types of gas and oil engines. Gas tractors. Special attention is paid to the modern oil engine as an economical source of power for irrigation and other heavy duty work.

304 Farm Structures. Class 1 hour, laboratory 4 hours. Credit 21/3. Prerequisite: Agron. 303.

Design, construction, material and cost of farm buildings, including barns, silos, machine sheds, swine and chicken houses. Concrete construction.

409 Farm Power Machinery. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: Agron, 101, 303.

A study of the various power machines of the farm—grinders, shellers, ensilage cutters, threshers, irrigating pumps, electric lighting plants, home water supply systems—in connection with the various prime movers. The installation and cost of gearing, belting and shafting. Farm power houses.

410 Rural Roads. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Agron. 303, 304.

Location, drainage, roadbed materials, construction, maintenance and costs. Laws governing. Rural road machinery.

412 Irrigation and Drainage. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Agron. 303, 304, 312.

Study and field practice in the location, operation and maintenance of these systems. Their efficiency, costs and profits. Their effect on the land and crops. The duty of water.

#### GENERAL AGRICULTURE

402 College and Experiment Station Work, Organization and Function. Class 2 hours, laboratory 4 hours. Credit 3½.

This course is intended to familiarize the Senior students with the history and organization of the American land grant colleges, including the agricultural experiment stations and the extension divisions. A study is made of the strong and weak points of these institutions as compared with other institutions of higher education in the United States from the standpoint of both the undergraduate and graduate student. The amount of Federal and State aid given these institutions and its distribution into educational, research and extension lines is discussed. The further object is to familiarize the student with the lines of work being undertaken in the various experiment stations and the special features that are made prominent in the various States. The laboratory work will be in the nature of research in the library. The course is designed to prepare students for entrance into college and station work where such is desired and to give those who are going into the more practical application of their calling upon the farm an opportunity to become familiar with the different institutions and the best means of utilizing the information available.

## THE SCHOOL OF ENGINEERING

ALFRED BOYD, Acting Dean

In compliance with the provisions of the Morrill land grant, the teaching of engineering was begun at the Oklahoma Agricultural and Mechanical College by the establishment of a course in mechanical engineering. The first class was graduated in 1902. Later, courses in electrical, civil and architectural engineering were added in the order named. These four departments compose the School of Engineering. As far as practicable, in the development of the courses, they have been kept closely related to the important industries of the State. With the growth of manufacturing, of the oil industry, the increased use of electrical power, the improvement of highways, of water supply systems, and increased interest in better buildings, the importance of having men with the proper training will be more fully recognized.

There are two large buildings on the campus devoted to the work of instruction in engineering. These are the Engineering Building and the Shop Building. The former was erected in 1912 at a cost of \$75,000.00. It is three stories high, covers an area 160 by 80 feet, and is built of reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories and boiler room, the electrical laboratory, the laboratories for the testing of structural materials and road materials, storage batteries, standardizing room, room for surveying instruments and office for the Dean. On the next floor are the engineering library, the physics laboratory and lecture room, four other lecture rooms for the different departments, rooms for photometery, physical apparatus, and offices for the heads of departments. On the top floor are the large drafting rooms, classrooms and offices for several of the departments, and rooms for the storing of records.

The Shop Building is of stone and brick and covers an area 40 by 200 feet. For a depth of 80 feet it is two stories high and

the balance one story. It provides accommodations for the wood shop, machine shop, forge shop and foundry, and a tool room.

The power plant of the College, with its steam boilers, steam engines and generators is also used by the School of Engineering for the purpose of making tests and familiarizing the student with the use of this class of machinery.

Mention should be made of the Engineering Society, an organization composed of students from the various engineering departments. They meet weekly and devote their energies to the study and discussion of engineering subjects. These meetings tend to encourage a lively interest in practical engineering work, and give the students confidence in speaking before an audience.

The departments of the School of Engineering will make use of the equipment of the shops and laboratories to carry on experimental work. The results will be published from time to time in the form of bulletins. This work of investigation will include the examination and testing of coal and fuel oil, tests of electrical apparatus, road materials, building materials, pumps, gas engines, examinations of water supply, and other subjects of importance to the people of the State.

# Professional Degrees in Engineering

A graduate of the School of Engineering who has been engaged in acceptable professional work for a period of not less than four years since graduation, who has been in responsible charge of such work for at least one year of this period, and shall present a satisfactory thesis, may be recommended to the State Board of Agriculture for one of the following professional degrees: Mechanical Engineer (M. E.), Electrical Engineer (E. E.), Civil Engineer (C. E.), Architectural Engineer (A. E.).

A candidate for a professional degree must file with the committee on graduate courses, at least one year before the granting of such degree, a detailed statement of his experience. If this record is approved, the committee will turn same over to the head of the department under whom the work for the desired degree most properly falls. The head of this department will then confer with the applicant in regard to the thesis and will require monthly reports from him thereafter as to his progress. Two bound copies of the thesis must be filed not later than April 1 of the year in which he proposes to qualify for the degree.

#### COURSES IN THE SCHOOL OF ENGINEERING

The following outline of study represents the required and elective work in the School of Engineering. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate a student must earn 36 credits per year, or a total of 144 credits, not including any credit given for military science or physical training. Students will not be allowed to register in less than fifteen nor more than twenty credit hours, except by special permis-

sion.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

(Same for the four Departments)

FIRST SEMESTER			SECOND SEMEST	ER	
Eng. 101, El. of Com 4 Eng. 103, Lib. Ref Fr. 301,			Eng. 102, El. of Com 4 Fr. 302, Ger. 204,		Credits.
Ger. 203, or Sp. 203	(4)	3 4 1-3	or Sp. 204	(4)	3 4 1-3 2 3
Math. 101, Col. Alg 2 Math. 103, Plane Trig 3 Draw. 101, Free. Draw. Shop 101, Wdwk. (C. E. A. E.)	(2)	2 3 2-3	M. E., Mech. Draw Shop 102, Wdwk. (C. E. A. E.)	(4)	1 1-3
Shop 103, Pat. Mkg (M. E., E. E.)	(4) (3) (3)	1 1-3	Shop 104, Pat. Mkg. (M. E., E. E.) Military Science Physical Education	(2) (3) (3)	2-3

#### Mechanical Engineering

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMES	TER	
Math. 201, Calculus	(4)	Credits.  4 3 1-3 4 2-3  2 2-3 1 1-3	Math. 202, Calculus	4 2 (4) 4 (2)	Credits. 4 3 1-3 4 2-3 4 1-3 2
		TITNIOD	VEAD		

FIRST	SEMESTER			SECOND SEMES	TER	
	H	ours.	Credits.		Hours.	Credits.
C. E. 301, Appld.	Mech 4		4	C. E. 302, Mech of Mat.	4	4
M. E. 301, Mat. of	Mach 2		2	M. E. 310, Hydraulics	2	2
M. E. 303, Mach.	Des 3		3	E. E. 308, Direct Cur.		
M. E. 305, Heat	Power			Mach	3 (2)	3 2-3
Engineering			4	M. E. 304, Mach. Draft.	(6)	2
M. E. 307, Mech.		(6)	2	M. E. 306, Thermody-	,	
Shop 301, Mach. S		(8)	2 2-3	namics	4	4
2007		(/	-, -	M. E. 308, Mech. Lab	(6)	2
				Shop 302 Mach Shop	245	1 1.3

#### SENIOR YEAR

SE	NIOR YEAR
FIRST SEMESTER	SECOND SEMESTER
Hours. Cred	lits. Hours. Credits.
M. E. 401, Steam Eng. Design 2 (6) M. E. 403, Gas Power	M. E. 412, Steam Power Plants 1 (4) 2 1-3
M. E. 403, Gas Power Engineering	Plants 1 (4) 2 1-3  E. E. 406, Electric Power Plants 1 (4) 2 1-3  M. E. 414, Works Management 3 3 3
Engineering 3 3 3 3 M. E. 405, Mech. Lab (6) 2 C. E. 407, Test. Lab (4) 1 E. E. 407, Alt. Cur Machines 3 (2) 3	1-3 agement
"M. E. 40/, Comp. Air	2-3 Specifications 2 2 M. E. 416, Thesis
Machinery or *M. E. 409, Pumping	or M. E. 418, Adv. Design (12) 4 Elective 4
Soc. Sci. 301, Elemen-	
*Only one of these two subjects	
omy one of these two subjects	will be given in any one year.
Electri	cal Engineering
SOPE	OMORE YEAR
FIRST SEMESTER	SECOND SEMESTER
Math. 201. Calculus 4 4	lits. Hours, Credits.  Math. 202, Calculus 4 4
A. E. 201, Des. Geom 2 (4) 3	1-3 A. E. 202, Des. Geom 2 (4) 3 1-3 2 3 Phy. 202, Engr. Phy 4 (2) 4 2-3
M. E. 201, Empir. Mach.  Design	M. E. 204, Kinematics 3 (4) 4 1-3 Shop 204, Foundry (6) 2 Military Science (3)
Surveying	2-3
M. E. 201, Empir. Mach. Design	2-3 1-3
	NIOD VEAD
	NIOR YEAR
FIRST SEMESTER	SECOND SEMESTER
Hours, Cree C. E. 301, Appld. Mech., 4	lits. Hours. Credits.
E. E. 301, Theory of Electricity	Materials
E. E. 303, Direct Cur.	Electricity
M. E. 305, Heat Power Engineering	Machines
Laboratory(6)	
Diop coo, Machine Diop.iii (1)	M. E. 308, Mech. Engr. Laboratory
	Shop 302, Mach. Shop (4) 11-3
	NIOR YEAR
FIRST SEMESTER	SECOND SEMESTER  Hours. Credits.
Hours, Cree	E. E. 402. Alternating
Current Machines 4 (4) 5 E. E. 403. Telephony 3 (2) 3	1-3 Current Machines 4 (4) 5 1-3 2-3 E. E. 404, Electric Pow-
C. E. 305, Hydraulics 3 (2) 3 E. E. 405, Electrical	2-3 er Transmission 2 2 E. E. 406, Electric Pow-
E. E. 401, Alternating Current Machines 4 (4) 5 E. E. 403, Telephony 3 (2) 3 C. E. 305, Hydraulics 3 (2) 3 E. E. 405, Electrical Machine Design 1 (4) 2 C. E. 407, Test. Lab (4) 1 Soc. Sci. 301, Elementary Sociology 2	E. E. 402, Alternating Current Machines
Soc. Sci. 301, Elemen- tary Sociology 2	1101100
	M. E. 422. Hydraulic
er Allen er	Machinery

## Civil Engineering

## SOPHOMORE YEAR

FIRST SEMES	rer		SECOND SEMESTER	
Math. 201, Calculus A. E. 201, Des. Geom. Phy. 201. Engr. Phy C. E. 203, Surveying A. E. 203, Materials and Construction Math. 205, Spher. Trig Military Science	4 2 (4) 4 (2) 2 (4) 2 1	Credits.  4 3 1-3 4 2-3 3 1-3	Hours. Credits.	

## JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credits.	Hours.	Credits.
C. E. 301, Appld. Mech4 C. E. 303, Roads and	4	C. E. 302, Mechanics of Materials 4	4
Pavements	2 3 2-3	C. E. 304, Reinforced Concrete	2
C. E. 307, Topographical Drawing	2-3	C. E. 306, Water Supply 3 C. E. 308, Test. Lab (2)	' <b>3</b> 2-3
Chem. 301, Mineralogy. 1 (4) M. E. 311, Steam and	2 1-3	tures 3 (6)	5
Gas Engineering 2 Shop 201, Forge Shop (4)	2 1 1-3	Chem. 320, Geology 2 Elective	, 2
Eng. 121, Es. of Public Speaking (2) Elective 1	2-3		
Elective	1		

#### SENIOR YEAR

FIRST SEMESTER		SFCOND SEMES	TER
Hours.	Credits.		Hours. Credits.
C. E. 401, Structural Design (6) C. E. 403, Irrigation (2) C. E. 405, Railway Engineering (2) C. E. 407, Test. Lab. (4) C. E. 409, Seminar (1) A. E. 401, Steel Construction (2) E. E. 409, Dynamo Electric Machinery (2) Soc. Sci. 301, Elementary Sociology (2) Elective (3)	2 2 2 1 1-3 1 2 2 2 2·3 2	C. E. 402, Concrete Structures C. E. 404, Sanitary Engineering C. E. 406, Contracts and Specifications C. E. 408, Thesis A. E. 404, Estimates Bact. 402, Sanitary Sci. Elective	3 3 2 2 100 3 1 3 2 3 3

# Architectural Engineering

#### SOPHOMORE YEAR

FIRST SEMESTER	SECOND SEMESTER	
Math. 201, Calculus 4 A. E. 201, Descriptive Geometry 2 (4) 3 1-3	Math- 202, Calculus 4 4 A. E. 202, Descriptive Geometry	
Phy. 201, Engr. Phy 4 (2) 4 2-3 A. E. 203, Materials and Construction 2 A. E. 205, History of Architecture 2 2	Phy. 202, Engr. Phy	
A. E. 207, Working Draw. and Details (6) 2 Military Science	A. E. 208, Elements of Architecture	

#### JUNIOR YEAR

FIRST SEMESTE	R		SECOND SEMESTER
F	Hours.	Credits.	Hours. Credits.
A. E. 301, Plumbing and Drainage		2	A. E. 302, Ornament (4) 11-3 C. E. 302, Mechanics
C. E. 301, Applied  Mechanics	(4)	4 2 1-3	of Materials
Chem. 301, Mineralogy. 1 M. E. 311, Steam and Gas Engineering		2	Ventilation 2 2 C. E. 304, Reinforced
A. E. 303, Shades, Shadows and Perspective	(4)	1 1-3	Concrete
C. E. 303, Roads and Pavements 2 A. E. 305, Pen and Ink		2	Structures
Rendering Draw. 301, Water Color	(4)	1 1-3	2008.
Rendering Eng. 121, Essentials of	(4)	1 1-3	
Public Speaking	(2)	2-3	
Design	(6)	2	
		SENIOR	YEAR
FIRST SEMESTE	R	SENIOR	YEAR SECOND SEMESTER
		SENIOR Credits.	
A. E. 401, Steel Con- struction	Tours.		SECOND SEMESTER  Hours. Credits.  A. E. 402, Superintendence
A. E. 401, Steel Construction 2 C. E. 401, Structural Design	Tours.	Credits.	SECOND SEMESTER  Hours. Credits.  A. E. 402, Superintendence 3 3 C. E. 406, Contracts and
A. E. 401, Steel Construction 2 C. E. 401, Structural Design C. E. 407, Testing Laboratory	Hours.	Credits.	SECOND SEMESTER   Hours. Credits.
A. E. 401, Steel Construction 2 C. E. 401, Structural Design C. E. 407, Testing Laboratory E. E. 409, Dynamo Electric Machinery 2	Hours.	Credits.	SECOND SEMESTER   Hours. Credits.
A. E. 401, Steel Construction 2 C. E. 401, Structural Design C. E. 407, Testing Laboratory E. E. 409, Dynamo Electric Machinery 2 E. E. 411, Wiring and Illuminating 1 C. E. 201, Elements of	(6) (4) (2) (4)	Credits.  2 2 1 1-3 2 2-3 2 1-3	Hours. Credits.   Hours. Credits.
A. E. 401, Steel Construction 2 C. E. 401, Structural Design C. E. 407, Testing Laboratory E. E. 409, Dynamo Electric Machinery 2 E. E. 411, Wiring and Illuminating 1 C. E. 201, Elements of Surveying 5 Soc. Sci. 301, Elementary	(6) (4) (2) (4) (2)	Credits.  2 2 1 1-3 2 2-3 2 1-3 2-3	Hours. Credits.   Hours. Credits.
A. E. 401, Steel Construction 2 C. E. 401, Structural Design C. E. 407, Testing Laboratory E. E. 409, Dynamo Electric Machinery 2 E. E. 411, Wiring and Illuminating 1 C. E. 201, Elements of Surveying 1	(6) (4) (2) (4) (2)	Credits.  2 2 1 1-3 2 2-3 2 1-3	Hours. Credits.   Hours. Credits.

#### DEPARTMENT OF MECHANICAL ENGINEERING

EDWARD JOSEPH KUNZE, Professor CHARLES JABLOW, Associate Professor EDGAR ELI BREWER, Foreman of Shops FRANK RUSSELL BRADLEY, Instructor CHARLES WILSON SKINNER, Instructor

The object of the instruction offered in this department is not only to impart to the students a clear understanding of the fundamental principles that underlie mechanical engineering, but also to give such practical training as is possible in a technical college.

There is a certain amount of overlapping of all the engineering courses. The student therefore acquires a broad knowledge of the different kinds of engineering. The work of the Freshman year is alike for all the engineering courses. The amount of differentiation increases from the beginning of the Sophomore year.

In the shops as well as in the drafting rooms, examples are made real by doing away, as far as possible, with exercise pieces as such. Real machines are designed and built for real purposes. The element of play is eliminated. Seniors and sometimes Juniors design the machinery that is made. Sophomores work out the details, and Freshmen trace the drawings. Each does the work for which he is best fitted. The object is not to make engineering less rigid, but to make it more interesting.

The steam, gas power, hydraulic and fuel and lubricant testing laboratories are all equipped with apparatus necessary for carrying on complete experiments. The wood shop, forge shop, machine shop and the foundry are likewise completely equipped with tools and machinery necessary to do work along lines obtaining in practice.

## **SUBJECTS**

#### MECHANICAL ENGINEERING

102 Mechanical Drawing. Drafting 4 hours. Credit 11/3.

Lettering and drawing from copy of machine parts; drawing to scale.

Text: Engineering Drawing, French.

201 Empirical Machine Design. Drafting 6 hours. Credit 2.

Prerequisite: M. E. 102.

Machine drawing and proportioning of machine parts from the standpoint of good usage and general appearance rather than from that of the analysis of stresses.

Text: Engineering Drawing, French.

204 Kinematics. Class 3 hours, drafting 4 hours. Credit 41/3.

Prerequisite: M. E. 201; Math. 105.

Theory of mechanism and application to instant-centers, cams, gears, linkages, belting, ball bearings, velocity and acceleration, diagrams, etc.

Text: Elements of Mechanism, Schwamb and Merrill.

301 Materials of Machines. Class 2 hours. Credit 2.

Prerequisite: Shop, 201, 204; Phy. 201; Chem. 102.

The manufacture and properties of iron and steel as applied to machine construction; heat treatment of steels; metallography; alloy steels; properties of copper alloys and bearing metals.

Text: Metallurgy of Iron and Steel, Stoughton.

303 Machine Design. Class 3 hours. Credit 3.

Prerequisite: M. E. 201, 204.

Concurrent with M. E. 301.

Design of machine parts by analysis of stresses applied, and selections of proper factors of safety.

Text: Machine Design, Kimball and Barr.

304 Machine Drafting. Drafting 6 hours. Credit 2.

Prerequisite: M. E. 303.

Drafting room applications of the work given in M. E. 303. Design and working drawings of complete machines. A short time is devoted to the subject of jig and fixture design.

Text: Machine Design, Kimball and Barr; Mechanism, Schwamb

and Merrill.

Reference book: Kent's Mechanical Engineer's Handbook.

305 Heat Power Engineering. Class 4 hours. Credit 4.

Prerequisite: Phy. 202. Concurrent with M. E. 307.

A functional course covering the construction and operation of steam and gas power apparatus, including reciprocating and turbine steam engines, internal combustion engines, gas producers, boilers and power plant auxiliaries.

Text: Heat Power Engineering, Hirshfield and Barnard; Steam Tables. Marks and Ravis.

306 Thermodynamics. Class 4 hours. Credit 4.

Prerequisite: M. E. 305: Math. 202.

The laws and properties of gases and vapors as applied to steam engines, gas engines, steam turbines, compressors and refrigerating machinery.

Text: Heat Power Engineering, Hirshfield and Barnard.

307 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Concurrent with M. E. 305.

Calibration of indicator springs, steam gauges, thermometers, dynamometers and planimeters; calibration of meters (venturi, disk and piston types); proximate analysis of coals; calorimeters (steam and fuel); flash and burning tests of oils; tests of lubricants and fuel oils.

308 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Prerequisite: M. E. 305, 307.

Tests of water wheels, hydraulic ram, centrifugal pumps; flow over weirs, through orifices, nozzles and flumes and other hydraulic tests; tests of injectors, pumps, air compressors; valve setting with the use of the indicator; engine and boiler tests.

310 Hydraulics. Class 2 hours. Credit 2.

Prerequisite: C. E. 301.

This course includes hydrostatics, hydrokinetics and hydrodynamics. Water power development.

Text: Hydraulics, Russell.

311 Steam and gas Engineering. Class 2 hours. Credit 2.

Prerequisite: Phy. 202.

The construction and selection of power plant machinery, including the different types of engines, boilers, pumps, compressors, refrigerating machines and power plant auxiliaries.

**401 Steam Engine Design.** Class 2 hours, drafting 6 hours. Credit 4. Prerequisite: M. E. 304, 306.

A study of the various types of reciprocating steam engines.

403 Gas Power Engineering. Class 3 hours. Credit 3.

Prerequisite: M. E. 306.

A study of modern internal combustion engines (gas, gasoline, oil and alcohol), and of the production of gas for motive power (natural, illuminating, producer, blast furnace and coke oven gas); gas producers and gas cleaning.

Text: Modern Gas Engine and Gas Producer, Levin.

405 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Prerequisite: M. E. 308.

Special engine and boiler tests; Hirns' analysis and various overall tests of power plants.

407 Compressed Air Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 303, 305.

A study of the physical properties of air; study of the characteristics of different types of air compressors with a view to intelligent selection of the proper type and size for any given set of conditions.

409 Pumping Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 303, 305.

History and development of pumping machinery; force and lift pumps; reciprocating and centrifugal pumps; hydraulic presses and hydraulic pressure lines.

412 Steam Power Plants. Class 2 hours, drafting 8 hours first half of semester. Credit 21/3.

Prerequisite: M. E. 305.

The building is designed on the drawing board after a careful study has been made of the different types of power plant apparatus; selection of units is then made to fulfill certain given conditions. The remainder of the semester is devoted to the design of the electrical side. (See E. E. 406.)

Text: Steam Power Plants, Meyer.

414 Works Management. Class 3 hours. Credit 3.

Prerequisite: Shop 302.

Factory location and arrangement; organization and administration; cost of production and methods of modern manufacture for the attainment of accuracy and high speed; labor problems and wage systems; industrial betterment, etc.

Text: Principles of Industrial Organization, Kimball.

416 Thesis. Class work or laboratory as assigned. Credit 4.

Prerequisite: All preceding courses.

The student is assigned a problem requiring some individual research, investigation or design on his part for the purpose of demonstrating ability or aptitude for independent work.

418 Advanced Design. Drafting 12 hours. Credit 4. Prerequisite: M. E. 304 and M. E. 305.

The work of design will come under some of the following subdivisions: Machine Tools, including fixtures and attachments; Boilers, a study of different types of boilers, furnaces, automatic stokers, and of smoke abatement; Internal Combustion Engines, a more intensive study than is given in M. E. 305; Gas Power Machinery, including gas producers, scrubbers, tar separators, washers, holders, etc. 420 Refrigeration. Class 2 hours. Credit 2.

Prerequisite: M. E. 304, 306.

A study of the theory and principles of construction and operation of the different types of apparatus used, and of the different systems employed in refrigeration. This course includes ice making, cold storage, and the further adaptation of refrigeration to the arts.

422 Hydraulic Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 310 or C. E. 305.

Theory, design, construction and installation of water wheels, pressure engines, and of modern hydraulic turbines, and a study of their characteristics. Water power development.

424 Heating and Ventilation. Class 2 hours. Credit 2.

Prerequisite: M. E. 305 or M. E. 311.

Theory and design of the various systems for the heating and ventilation of buildings; hot air, hot water, steam, and the plenum and vacuum systems; central station or district heating.

Text: Heating and Ventilating Buildings, Carpenter.

#### SHOP PRACTICE

The lectures on shop practice are given occasionally during the regular shop periods. Informal talks are also given from time to time as the need to cover some general consideration is presented.

- 101 Woodworking. Shop practice 4 hours. Credit 11/3.
- 102 Woodworking. Shop practice 2 hours. Credit 2/3.
  Prerequisite: M. E. 101.

The student in these courses is required to make a graded set of exercises in woodwork and receives practice in the use and care of hand tools. Wood turning and framework construction. Lectures are given on timber construction, carpentry and structural details.

- 103 Patternmaking. Shop practice 4 hours. Credit 11/3.
- 104 Patternmaking. Shop practice 2 hours. Credit %. Prerequisite: M. E. 103.

The student in these courses is required to make a graded set of wood patterns. As far as possible all exercises are selected from designs of machines to be built in the shops. The course also includes the use and care of hand tools, wood turning and the construction of core boxes. Lectures are given on modern special woodworking machinery and pattern shop equipment.

Text: Wood Pattern Making, Purfield.

201 Forge Shop. Shop practice 4 hours. Credit 11/3.

The student is required to make a graded set of forgings and the various styles of welds; tool dressing; hardening and tempering; case hardening and the heat treatment of various carbon and high speed tool steels. Lectures are given on the study of wrought metals.

Text: Forge Practice, Bacon.

204 Foundry. Shop practice 6 hours. Credit 2.

The student is required to make a graded set of molds of patterns which, for the most part, are to be used on machines or apparatus that is to be built in the shops; preparation and charging the cupola, pouring off heats, and mixing and baking cores. Lectures are given on foundry practice.

Text: Elementary Foundry Practice, Richards.

301 Machine Shop. Shop practice 8 hours. Credit 23/3.

302 Machine Shop. Shop practice 4 hours. Credit 11/3. Prerequisite: M. E. 301 or M. E. 303.

303 Machine Shop. Shop practice 4 hours. Credit 11/3.

The student in these courses is required to make a graded set of machine parts. As far as possible all exercises are selected from designs of machines that are to be built in the shops. Lectures are given on the art of cutting metals.

Text: Machine Shop Practice, Kaup.

### DEPARTMENT OF ELECTRICAL ENGINEERING

WILLIAM CARL LANE, Professor

The course in electrical engineering is designed to give the student a thorough training in the fundamental principles of electricity and in their application to the problems of the engineer. The successful electrical engineer must have a broad general engineering training in addition to his training in electricity; hence, the student is required to take a number of subjects in the other departments of the School of Engineering. These include applied mechanics, heat power engineering, refrigeration, hydraulics, strength of materials and several other of the allied engineering branches.

The first two years of the course are devoted to the fundamental subjects. During this period the student receives a careful training in English, foreign languages, mathematics, chemistry, physics, drawing, surveying and shop practice.

The electrical engineering work proper begins in the Junior year. One course which extends throughout the year deals with the principles of electrical engineering, and covers both direct and alternating currents from the theoretical side. Other courses take up in detail direct current machinery and electrical measuring instruments. All courses include laboratory work of a practical nature. The Senior year's work includes a detailed study of alternating current machinery, electric power plant design,

electric power transmission and telephony. Laboratory practice in alternating currents includes testing of generators, motors, synchronous converters, transformers and rectifiers. The work in power plant design includes the design of a plant for some town with which the student is familiar. Care is taken to coordinate all work of the classroom with the work of the laboratory.

The dynamo laboratory located in the first floor of the Engineering Building is equipped with modern direct and alternating current generators and motors, synchronous converters, transformers, rectifiers, are lamps, starting devices and switchboards. An ample supply of voltmeters, ammeters, wattmeters, tachometers and other necessary measuring instruments is provided. The laboratory equipment is representative of modern practice. No machines are wired up permanently. The students of each class are required to wire up the machines and adjust them for best operation before performing an experiment. At the close of a test all wires are disconnected.

The battery room and the calibrating laboratory are adjacent to the dynamo laboratory. The former contains a 90-cell storage battery for supplying energy for calibrating purposes, a battery for operating the College bell system, and other experimental batteries. The latter is equipped with a Leeds-Northrup potentiometer and standard shunts, a standard Weston voltmeter, a Weston indicating wattmeter and the other necessary auxiliary apparatus for calibrating both laboratory and commercial instruments.

Modern telephone apparatus is provided for use in connection with the course in telephony. A darkroom is equipped with a photometer and standard lamps, and is devoted exclusively to photometric work.

The wireless laboratory is located on the second floor of the Engineering Building. It is equipped with a 1,000-watt transformer and the necessary apparatus for sending and receiving messages. An aerial 500 feet long extends from the top of the 125-foot smokestack of the College power plant to a 40-foot mast mounted on the roof of the Engineering Building. This gives a sending range of several hundred miles and a receiving range of about two thousand miles.

# **SUBJECTS**

301 Theory of Electricity. Class 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: Phy. 202; Math. 202.

Covers static electricity, the galvanic current, magnetism and electromagnetism.

Text: Principles of Electrical Engineering, Pender.

302 Theory of Electricity. Class 2 hours, laboratory 2 hours. Credit 2%.

Prerequisite: E. E. 301.

A continuation of E. E. 301. A study of electromagnetic induction and alternating current.

Text: Principles of Electrical Engineering, Pender.

303 Direct Current Machines. Class 2 hours, laboratory 2 hours. Credit  $2\frac{1}{2}$ .

Prerequisite: Phy. 202; Math. 202. A study of direct current machinery.

Text: Elements of Electrical Engineering, Franklin and Esty (Vol. I).

304 Direct Current Machines. Class 3 hours, laboratory 4 hours. Credit  $4\frac{1}{3}$ .

Prerequisite: E. E. 303. A continuation of E. E. 303.

Text: Elements of Electrical Engineering, Franklin and Esty (Vol. I).

306 Electrical Instruments and Calibration. Class 1 hour, laboratory 2 hours. Credit 1%.

Prerequisite: E. E. 301, 303.

Theory of electrical measuring instruments and their calibration.

308 Direct Current Machinery. Class 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: Phy. 202; Math. 202.

A study of direct current machinery.

Text: Principles and Practices of Electrical Engineering, Gray.

401 Alternating Current Machines. Class 4 hours, laboratory 4 hours. Credit 5½.

Prerequisite: Math. 202; E. E. 302, 304.

A study of the fundamentals of alternating current and their application to alternators, transmission lines, synchronous motors and conversion apparatus.

Text: Principles of Electrical Engineering, Franklin and Esty (Vol. II).

402 Alternating Current Machines. Class 4 hours, laboratory 4 hours. Credit 51/3.

Prerequisite: E. E. 401.

A continuation of E. E. 401. A study of transformers and alternating current motors.

Text: Principles of Electrical Engineering, Franklin and Esty (Vol. II).

403 Telephony. Class 3 hours, laboratory 2 hours. Credit 33/3.

Prerequisite: E. E. 301, 302.

Theory and practice in telephony.

Text: American Telephone Practice, Kempster B. Miller.

404 Electric Power Transmission. Class 2 hours. Credit 2.

Prerequisite: E. E. 401, 407.

Includes generation, transmission, distribution and utilization of power by electrical process.

Text: Elements of Electrical Transmission, Ferguson.

405 Electrical Machine Design. Class 1 hour, designing and drafting 4 hours. Credit 21/3.

Prerequisite: E. E. 304.

Theory and design of a dynamo.

Text: Electrical Machine Design, Gray.

406 Electric Power Plants. Class 1 hour, designing and drafting 4 hours. Credit 21/3.

Prerequisite: E. E. 401 or 407.

Theory and practice in the design of the electrical equipment of a power plant.

407 Alternating Current Machines. Class 3 hours, laboratory 2 hours, Credit 3%.

Prerequisite: E. E. 308.

Theory and operation of alternating current machinery.

Text: Principles and Practice of Electrical Engineering, Gray.

408 Electrical Engineering Seminar. Class 1 hour. Credit 1.

**409 Dynamo-Electric Machinery.** Class 2 hours, laboratory 2 hours. Credit 2%.

Prerequisite: Phy. 202 and Math. 202,

A brief course in direct and alternating current machinery.

Text: Morecroft.

411 Wiring and Illumination. Class 1 hour, planning and designing 4 hours. Credit 2½.

Prerequisite: Phy. 202.

Theory and practice in the design of the lighting and wiring of buildings.

## DEPARTMENT OF CIVIL ENGINEERING

ALFRED BOYD, Professor

This department offers instruction in the various branches of civil engineering. Training is given in surveying, in the principles of railway and highway construction, in designing of structures of steel and concrete, in irrigation, water supply and sewage disposal.

The department is well supplied with surveying instruments, including transits, wye and dumpy levels, compass, plane table, barometer, hand-levels, chains, tapes and rods. The instruction in field work gives the students sufficient familiarity with the instruments and confidence in their use to perform the ordinary operations of surveying. Practice is given in railroad location and in the field work in connection with drainage and irrigation projects, water supply and sewer construction.

In the course in bridge and structural design, careful study is made of the theory of stresses and practice given in actual designing of wood, steel and concrete structures.

The testing laboratory contains a 100,000-pound testing machine, two briquette machines, sieves for the testing of sand and cement, moist closet, boiling apparatus, Vicat and Gilmore needles, specific gravity and permeability apparatus. For the examination of road materials the laboratory is well equipped with the standard machines. These include an abrasion machine, a hardness machine, an impact machine, diamond drill, saw and crusher. A standard rattler for the testing of paving brick and the necessary apparatus for making the physical tests of bituminous materials are also provided. This equipment is valuable in connection with the course in roads and pavements.

Class instruction in hydraulics is supplemented by work in the hydraulic laboratory. Measurements of flow are made for weirs, nozzles, pipes and flumes. Tests of a Pelton wheel, of a centrifugal pump, of water meters, and field measurements by means of a current meter are also made. A thorough training in hydraulics is necessary to deal with problems in water supply, irrigation and hydraulic development.

In addition to the work in mathematics, physics and chemistry required of all engineering students, certain courses adapted to the needs of civil engineers are required. Spherical trigonometry is given in the Sophomore years, and an opportunity to elect least squares in the Junior or Senior year. Geology and mineralogy are required subjects. They have a direct bearing upon the study of road and building materials. A course in sanitary biology is offered by the Department of Bacteriology and is of special importance for a clear understanding of sewage disposal and water supply. A course in steam and gas engineering

and one in dynamo-electric machinery, given by other departments, are specially adapted to the needs of civil engineering students.

The drawing room for this department is well equipped and well lighted. There is a good collection of working drawings and designs, representing standard practice in different fields of engineering, which are used for reference in several of the courses.

# **SUBJECTS**

201 Elements of Surveying. Field work 2 hours. Credit 2/3.

Prerequisite: Math. 103.

Care, use and adjustment of the transit and level. Traversing, leveling, running of profiles, keeping of field notes.

203 Surveying. Class 2 hours, field work 4 hours. Credit 31/3.

Prerequisite: Math. 103.

Taking of topography by means of transit and stadia, and plane table. Observations for meridian. Measurements of baseline. Tri-

Text: Theory and Practice of Surveying, Johnson,

204 Railway Surveying. Class 2 hours, field work 6 hours. Credit 4. Prerequisite: Math. 103.

Exercises in simple, reverse and transition curves; preliminary and location surveys for a short line of railroad; cross-sections and

Text: Railroad Curves and Earthwork, Allen.

301 Applied Mechanics. Class 4 hours. Credit 4.

Prerequisite: Math. 202,

Principles of statics; theory of structures; dynamics. Text: Applied Mechanics for Engineers, Hancock.

302 Mechanics of Materials. Class 4 hours. Credit 4. Prerequisite: C. E. 301.

Properties of materials; flexure; beams, columns shafts.

Text: Strength of Materials, Hancock and Slocum.

303 Roads and Pavements. Class 2 hours. Credit 2.

Methods of construction and maintenance of various types of roads and pavements. Road machinery and road organization.

304 Reinforced Concrete. Class 2 hours. Credit 2.

Prerequisite: C. E. 301.

Theory and practice in the design of reinforced concrete.

Text: Reinforced Concrete Construction, Hool.

305 Hydraulics. Class 3 hours, laboratory 2 hours. Credit 32/3.

Prerequisite: Math. 202.

Fundamental principles and their application; laboratory determination of coefficients.

Text: Textbook of Hydraulics, Russell.

306 Water Supply. Class 3 hours. Credit 3.

Prerequisite: C. E. 305.

Sources of supply. Design, construction and maintenance of waterworks systems. Methods of purification.

Text: Public Water Supplies, Turneaure and Russell.

307 Topographical Drawing. Drawing 2 hours. Credit 3/3.

Prerequisite: C. E. 203.

Conventional symbols, lettering, preparation of profiles and maps.

308 Testing Laboratory. Laboratory 2 hours. Credit 3/3.

Prerequisite: C. E. 301.

Testing of sand, cement, concrete, road materials.

310 Framed Structures. Class 3 hours, drawing 6 hours. Credit 5. Prerequisite: C. E. 301.

Stresses in simple structures; graphical analysis; elements of design.

401 Structural Design. Drawing 6 hours. Credit 2.

Prerequisite: C. E. 310.

Design of structures of wood and steel, and of reinforced concrete as applied to buildings.

402 Concrete Structures. Class 1 hour, drawing 4 hours. Credit 21/3. Prerequisite: C. E. 302.

Designing of retaining walls, dams and reinforced concrete arches.

403 Irrigation. Class 2 hours. Credit 2.

Prerequisite: C. E. 305.

Capacity of canals; surveys; sources of supply; design of structures; methods of applying water; irrigation law.

404 Sanitary Engineering. Class 3 hours. Credit 3.

Prerequisite: C. E. 305.

Design and construction of sewerage systems; modern methods of sewage disposal.

405 Railway Engineering. Class 2 hours. Credit 2.

Prerequisite: C. E. 204.

Methods of construction and maintenance of roadbed and structures; surveys and estimates; organization; signaling; economic theory as applied to location and operation.

406 Contracts and Specifications. Class 2 hours. Credit 2.

The law of contracts as applied to engineering practice; the technical features of specifications; relation of engineer and contractor.

407 Testing Laboratory. Laboratory 4 hours. Credit 11/3. Prerequisite: C. E. 302.

Laboratory examinations of the various materials of construction.

408 Thesis. Laboratory 10 hours. Credit 3½.

Original investigation of some engineering subject,

409 Seminar. Class 1 hour. Credit 1.
Discussion of current engineering literature.

# DEPARTMENT OF ARCHITECTURAL ENGINEERING

FREDERIC CHILD BIGGIN, Professor

Modern buildings of permanent construction require the services of architectural engineers in their design and erection. There is a steady demand for trained men to handle this work. Earnest students who come properly prepared will find that the course offered by this department is thorough and practical, and will be ready after graduation to attack the problems of structural designing and superintendence that come up in the modern architect's office.

During the Freshman and part of the Sophomore years a foundation for the later technical work is laid by courses in English and foreign languages, mathematics, chemistry, physics and drawing. This is supplemented by practical experience in the College shops. Throughout the Sophomore year also run courses in building materials and construction, the historical development of architectural styles and the Greek and Roman orders. In the drafting room the student learns how to use these orders and to prepare working drawings for buildings.

Architectural design starts with the Junior year, and as much time is devoted to this and to the associated subjects of ornament, rendering and perspective as is practicable in an architectural engineering course. The balance of the Junior year is given to strength of materials, reinforced concrete, plumbing and drainage, steam and gas power engineering, and heating and ventilation.

Each Senior student prepares for his thesis design preliminary sketches and full working plans of a steel frame or reinforced concrete, fireproof office or commercial building. This includes computations for structural work. In the Senior year are also given additional courses in design, testing laboratory, dynamo electric machinery, wiring and illumination, specifications, estimates and superintendence. Running through the entire year is a seminar in which by lectures, selected courses of reading, the preparation of papers and discussions, matters of general interest are taken up and a correct attitude on professional ethics and practice developed.

The architectural section of the students' organization known as the Engineering Society is a force in the maintenance of that

"esprit de corps" which is so essential to the attainment of results. During the summer vacation architectural students are expected to spend as large a part of the time as possible in the offices of practical architects, and it has been found that those men who regularly follow this plan make the greatest advancement in college work.

The equipment of the architectural lecture room includes a Bausch & Lomb "Universal Balopticon" for the projection of slides and plates, and a carefully selected collection of lantern slides, drawings and works of reference. The drafting room is provided with "Economy" drawing tables of a type adopted as standard by the department, having ample drawer capacity for students' work and tools, a top 39 by 72 inches for perspectives and loose, inclined boards 32 by 44 inches for general use.

All courses offered by this department are open to election by other students throughout the College, subject to stated prerequisites and the consent of the heads of departments involved. Work shown on the schedule, but not mentioned under the following heads, is given by other departments or Schools of the College.

A course in architecture may be offered by the department during the coming year, provided the number of students desiring to enter such a course proves sufficient to justify the step. Advanced architectural design, rendering in water colors and India ink, and other branches of applied art, will replace for this course some of the higher mathematics and purely engineering subjects scheduled for the course in architectural engineering.

# **SUBJECTS**

201 Descriptive Geometry. Class 2 hours, drafting 4 hours. Credit  $3\frac{1}{3}$ .

Prerequisite: M. E. 102.

Orthographic projection and problems of points, lines and planes; shades and shadows. Practical use of subject and its many applications particularly stressed.

Text: Practical Descriptive Geometry, Smith.

202 Descriptive Geometry. Class 2 hours, drafting 4 hours. Credit  $3\frac{1}{3}$ .

Prerequisite: A. E. 201.

Continuation of 201. Properties, intersections and development of surfaces; isometric and oblique projections; perspective drawing. Text: Same as 201.

### 203 Materials and Construction. Class 2 hours. Credit 2.

Carpenter work; properties and uses of various woods; methods of framing; mill construction; exterior and interior finish; builder's hardware.

Text: Building Construction, Kidder (Part II).

# 204 Materials and Construction. Class 2 hours. Credit 2.

Prerequisite: A. E. 203.

Continuation of 203. Foundations, footings and walls; stones and stone cutting; brickwork; concrete; terra cotta; plastering.

Text: Building Construction, Kidder (Part I).

205 History of Architecture. Class 2 hours, Credit 2.

Prerequisite: General History.

Origin and development of historical styles of architecture from the earliest times to the close of the Romanesque period. Typical examples are studied in detail, and for this purpose the lantern is in constant use. Stress is laid on the evolution of a style from changes in structural forms, political conditions and national character.

Text: History of Architecture, Hamlin.

## 206 History of Architecture. Class 2 hours. Credit 2.

Prerequisite: A. E. 205.

Continuation of 205. Gothic, Renaissance and modern architecture. During the latter part of the semester particular attention is given to architectural development in the United States from colonial days to the present time.

Text: Same as 205.

## 207 Working Drawings and Details. Drafting 6 hours. Credit 2.

Prerequisite: M. E. 102.

Plans and details are obtained from the offices of practicing architects and employed to illustrate correct methods of drafting. The study of these is supplemented by lectures, textbooks and reference to books and plates in the architectural library. A course in lettering is included.

Text: Architectural Drafting, Greenberg and Howe; Details of Building Construction, Martin; Essentials of Lettering, French and Meikeliohn.

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# 208 Elements of Architecture. Drafting 6 hours. Credit 2.

Prerequisite: A. E. 205 and A. E. 207.

The Greek and Roman orders are drawn in detail and a study made of their proportions, development and application to architectural design.

Text: Study of the Orders, and Plates, Brown, Bourne and Von

Holst.

# 301 Plumbing and Drainage. Class 2 hours. Credit 2.

Plumbing systems and fixtures; water supply and filtration; sewage disposal and general sanitation.

Text: Plumbing, Gray and Ball; Sanitation, Water Supply and Sewage Disposal, Gerhard.

Sewage Disposal, Gerhard.

# 302 Ornament. Drafting 4 hours. Credit 11/3.

Prerequisite: A. E. 205; A. E. 206; A. E. 208.

History and development of ornament and its application to architectural design.

Text: Handbook of Ornament, Meyer.

303 Shades, Shadows and Perspective. Drafting 4 hours. Credit 11/3. Prerequisite: A. E. 201 and A. E. 202.

Advanced work in architectural perspective drawing and the delineation of shades and shadows.

Shades and Shadows, Gardner; Perspective Drawing, Lawrence.

305 Pen and Ink Rendering. Drafting 4 hours. Credit 11/3.

Methods and practice of pen and ink rendering as applied to architectural drawings.

Text: Rendering in Pen and Ink, Gregg; Pen Drawing, Ma-

ginnis.

307 Architectural Design. Drafting 6 hours. Credit 2.

Prerequisite: A. E. 207 and A. E. 208.

Elements of planning and design. Problems commence with a residence, for which sketch plans, elevations and sections are pre-pared. These are criticised and followed by working drawings and details.

Text: Composition, Van Pelt; Successful Houses, White.

308 Architectural Design. Drafting 6 hours. Credit 2.

Prerequisite: A. E. 307.

Continuation of 307. Problems include workshops and factories in "mill" construction, reinforced concrete and steel.

Text: Engineering of Shops and Factories, Tyrrell.

401 Steel Construction. Class 2 hours. Credit 2.

Prerequisite: C. E. 302 and C. E. 310.

Steel frame construction of buildings and its application to modern fireproof work.

Text: Steel Construction, Burt.

402 Superintendence. Class 3 hours. Credit 3.

Prerequisite: A. E. 401 and A. E. 407.

Superintendence of building construction. Lectures and inspection trips.

Text: Building Superintendence, Clark.

403 House Planning. Class 2 hours, drafting 4 hours. Credit 3\%.

General course for students in School of Home Economics. Elements of planning, building construction, plumbing, heating and ventilation; approximate estimates of cost. Sketch plans for a typical residence are prepared.

Text: Successful Houses, White.

404 Estimates. Class 2 hours. Credit 2.

Prerequisite: C. E. 304 and A. E. 401.

Approximate and detailed estimates of quantities and costs, covering various classes of construction.
Text: New Building Estimator, Arthur.

405 Seminar. Class 1 hour. Credit 1.

Prerequisite: A. E. 307 and A. E. 308.

Lectures, selected courses of reading, preparation of papers and discussions on matters of value and interest not covered by other courses; professional ethics and practice,

406 Seminar, Class 1 hour, Credit 1.

Prerequisite: A. E. 405.

Continuation of 405. Reference works such as the publications of the American Institute of Architects and the current architectural and engineering magazines are in constant use, as are also the books and plates in the architectural and general libraries.

407 Architectural Design. Drafting 12 hours. Credit 4.

Prerequisite: A. E. 308; C. E. 304; M. E. 424.

Continuation of 308. School planning and construction. A most practical course in view of the fact that experts condemn many of the present day school buildings as unsanitary and firetraps. Problems include structures to suit varying conditions and resources, but the desirability of fireproof, reinforced concrete construction is particularly stressed.

Text: School Architecture, Wheelwright.

408 Architectural Design. Drafting 30 hours. Credit 10.

Prerequisite: A. E. 401 and A. E. 407.

Thesis design, consisting of an office building or other large commercial problem selected by the student under advice of the professor in charge. Method of construction is also optional, but must be fireproof, either steel frame or reinforced concrete. Thesis includes working drawings, computations for structural parts and approximate estimates of cost.

## TRADES PRACTICE COURSE

For the benefit of those who do not intend to take advanced work in engineering, but wish to obtain special training along certain lines, a two-year course is offered. Applicants for entrance to this course must be seventeen years old and must have completed the eighth grade of the public schools. In addition to the work shown in the following schedule, students are required to take at least six hours of classwork in the Secondary School. This work is subject to the approval of the Principal of the Secondary School.

		FIRST Y	YEAR
FIRST SEMESTER			SECOND SEMESTER
Woodwork	(4) (6) (4) (4)		Woodwork         (4)           Farm Machinery         2 (6)           Drawing         (4)           Forge Shop         (4)
		SECOND	YEAR
FIRST SEMESTER			SECOND SEMESTER
Wood Turning	(4) (4) (4) (4)		Cabinet Work       (4)         Wood Carving       (4)         Drawing       (6)         Foundry       (6)

The following additional courses will be offered upon sufficient demand: Pipe Work, Practical Electrical Work, Steam and Gas Engines, Concrete Construction, Automobiles.

## THE SCHOOL OF HOME ECONOMICS

MISS RUTH MICHAELS, Dean

The following four-year course of study has been planned to meet the demands of young women: (1) Those who wish to combine the study of home problems and the related arts and sciences with general academic work; (2) those who wish to become teachers of home economics; (3) those who wish to enter some other professional line of home economics work.

In addition to this work the School gives a twenty weeks' short course in domestic economy for women who can be at the College only a short time. Also during the annual Farmers' Week many lectures and demonstrations are given. The aim of these is to give instruction in the problems of food, clothing and shelter, and to provide an opportunity for discussion of questions relating to the home.

Courses of study in home economics have been developed as a result of social and economic changes. These changes have created a demand for educational work for young women fitting them to be more efficient and more serviceable in their homes and communities.

In the professional lines, aside from teaching, there are many openings for young women as designers, house furnishers and decorators, dieticians in schools and hospitals, in the extension field, and as managers in various institutions.

In the teaching profession openings are found in city schools, consolidated and rural schools, and opportunities are given at the College for special training for this work.

### COURSES IN THE SCHOOL OF HOME ECONOMICS

The following outline of study represents the required and elective work in the School of Home Economics. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate a student must earn 36 credits per year, or a total of 144 credits, not including any credit for physical training. Students will not be allowed to register in less than fifteen nor more than twenty credit hours, except by special permission. Sophomore electives are open to Juniors and Seniors in other Schools of instruction where the necessary prerequisite work is taken.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

FIRST SEMEST	ER		SECOND SEMES	TER	
	Hours.	Credit.		Hours	. Credit.
Dom. Art 101, Hand			Dom. Art 102, Elemen-		
Sewing-Elementary			tary Dressmaking	2 (4)	3 1-3
	2 (4)	3 1-3	Chem. 102, General		
Chem. 101, General			_ Chemistry	3 (4)	4 1-3
Chemistry	3 (4)	4 1-3	Eng. 102, Elements of		
Eng. 101, Elements of			Composition	4	4
Composition	4	4	Zool, 202, General		
Phy. 101, Household			Zoology	3 (4)	4 1-3
Physics	2 (2)	2 2-3	Eng. 122, Essentials of		
Eng. 103, Library			Public Speaking	(2)	2-3
Reference	(1)	1-3	Draw. 102, Freehand		
Eng. 121, Public			Drawing		2-3
Speaking	(2)	2-3	Physical Education	(3)	
Draw. 101, Freehand					
Drawing		1 1-3			
Physical Education	(3)				

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMES	TER	
	ours.	Credit.	D 0 1 000 D 1	Hours.	Credit.
Dom. Sci. 201, Food Study	(4)	3 1-3	Dom. Sci. 202, Food	2 (4)	212
Dom, Art 201, Textiles 2	(4)	2	Dom. Art 204, Costume	2 (4)	3 1-3
Dom. Art 203, History		_	Designing	1 (4)	2 1-3
of Costume 2		2	Eng. 202, Description		
Eng. 201, Exposition		0	and Narration	2	2
and Argumentation 2		2	Eng. 204, Magazine		
Eng. 203, News Writing. 2		2	Writing	2	2
Chem. 203, Quantitative			Chem. 310, Food Analy-		_
Analysis 1		2 1-3	sis and Textiles	1 (4)	3 1-3
Phys. 201, Advanced 3 Draw. 201, Water Color 1		3 2-3 1 2-3	Hist. 303, Industrial	2	2
	(3)	1 2-3	History Draw. 202. Water Color		1 2-3
- my 0.000 - 2000000000000000000000000000000	(3)		Physical Education		1 2-3
			Elective	4	4

#### JUNIOR YEAR

FIRST SEMESTER		SECOND SEMES	TER	
Hours.	Credit.		Hours.	Credit.
Dom. Sci. 301, Food Study	3 1-3 2-3	Dom. Sci. 302, Food Study	2 (4)	3 1-3
Dom. Art 303, Drafting and Crinoline Model-	20	Dressmaking	(4)	1 1-3
ing	2-3	Dom. Art 304, Art Needlework Econ. 308, Business for	(4)	1 1-3
Bacteriology	3 1-3 2 1-3	Women Fr. 202	2	2
Fr. 201 or 3 Elective 5	3 5	Ger. 204	3 7	3 7
	SENIOR	YEAR		
FIRST SEMESTER		SECOND SEMES	TER	
Dom. Sci. 401, Dietetics. 2 (4) Arch. Engr. 403, House Planning	3 1-3	Dom. Sci. 402, Dietetics. Dom. Art 404, Home Decoration and Furnishing Dom. Art 402, Millinery. Dom. Sci. 404, Home Hygiene Elective	2 (4) 1 (4) 1 (2)	Credit. 3 1-3 2 1-3 1 2-3 2 9

#### Suggested Electives-General Courses in Home Economics

F . 1	H	ours.	Credit.
Foreign Language Eng. 303, American Literature Eng. 207, 208, Survey of English Literature	4		2 4
Sociology, 301, Elementary Sociology	3		3 • 1 1 1-3
Music An. Husb. 305, 306, Farm Poultry	2		
Hist. 301, 302, English History Eng. 302, Feature and Publicity Writing	3	( ' /	3 2

# Suggested Electives-Teacher's Course in Home Economics

		Credit.
Educ. 301, 302, Psychology	3	3
Educ. 401, History of Education	2	2
Educ. 404, School Supervision	1	1 3 1-3
Home Econ. 405, 406, Home Econ. Education	2 (4)	3 1-3
Physical Education	(3)	1
An. Husb. 305, 306, Farm Poultry	2 (2)	2 3 2-3
Hort. 302, Vegetable Growing	3 (2)	3 2-3
Hort 402. Landscape Gardening	3 (2)	3 2-3
Chem., Advanced Organic Chemistry		
Chem Physiological Chemistry		

NOTE.—Students desiring a State certificate must have credits for 20 hours in Education, as well as credits in Public School Music, Agriculture and Oklahoma History.

### DEPARTMENT OF DOMESTIC SCIENCE

RUTH MICHAELS, Professor EDITH COFFMAN, Assistant

This department has well arranged office, lecture room and laboratories in the Woman's Building. The food laboratory is equipped for twenty-four students, has built-in desks, each one fitted with individual cooking equipment and electric plates. It also contains coal range, fireless cooker and all common as well as many uncommon household utensils. The adjoining dining room is furnished in an attractive style and is used in connection with the planning and serving of meals in all food study classes. In the library may be found splendid reference books and bulletins as well as the leading popular and technical magazines.

# **SUBJECTS**

201 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Chem. 101, 102.

Production, manufacture, chemical composition and nutritive value of typical foods, including principles and processes involved in simple cookery.

202 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: D. S. 201.

Continuation of D. S. 201.

Text: Source, Chemistry and Use of Food Products, Bailey.

301 Food Study. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{2}$ 3. Prerequisite: D. S. 202; Chem. 203, 205, 208; Physiology 201.

Advanced study of the principles and processes involved in food preparation, considering in detail nutritive value, cost and service.

302 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: D. S. 301; Bact. 303.

Continuation of D. S. 301.
Text: Food Products, Sherman,

401 Dietetics. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ . Prerequisite: D. S. 302; Chem. 313.

Study of foods as related to feeding of individuals and groups under various conditions of health and environment; includes study of metabolism of food classes; of dietary standards and the actual preparation of various dietaries.

402 Dietetics. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: D. S. 401. Continuation of D. S. 401.

Text: Chemistry of Foods, Sherman; Manual of Dietetics, Rose.

403 Institutional Cookery. Laboratory 4 hours. Credit 11/3.

Prerequisite: D. S. 201, 202, 301, 302.

Purchase, preparation and service of foods in large quantities. Will aid students desiring positions as managers in lunchrooms, tearooms, etc.

404 Home Hygiene. Class 2 hours. Credit 2.

Prerequisite: Bact. 303.

The situation, surroundings, ventilation, plumbing and similar conditions of the modern home as related to health.

405 Home Economics Education. Class 2 hours, laboratory 2 hours. Credit 22/3.

Prerequisite: All preceding work in D. S. and D. A.

Organization of subject content and its relation to other subjects in school curricula; methods of teaching these subjects; equipment; and literature:

406 Home Economics Education. Class 2 hours, laboratory 2 hours. Credit 22/3.

Prerequisite: All preceding work in D. S. and D. A.

Continuation of 405.
Text: Methods of Teaching Home Economics, Kinne; Domestic Arts in Woman's Education, Cooley.

IMPORTANT.—Chemistry 205, Elementary Organic Chemistry, was inadvertently omitted from outline printed on page 63. It is a required subject in the first semester of the Sophomore year of Home Economics.

## DEPARTMENT OF DOMESTIC ART

MARGARET EVANS, Professor Susan E. Cage, Assistant

The department is located in the east wing of the Woman's Building and has two well equipped sewing laboratories, locker room, exhibit room and office.

The laboratory equipment consists of sewing tables, sewing machines, electric heating plate and iron, dress forms, drafting systems, loom, illustrative material, such as cotton, wool, silk and flax, and a sequence of the manufacture of shear, needles and sewing cotton.

Emphasis is laid upon the artistic and practical side of technical work. Freedom of expression in line, form and color is encouraged.

The courses in sewing have a two-fold purpose: The first is a well developed course of instruction that shall develop skill on the part of the student and train for good judgment in selection of textile materials. The second purpose is professional, being to give a content from which courses of study may be organized and show development of subject matter, its teaching possibilities, methods of presentation and class management.

# **SUBJECTS**

101 Hand Sewing and Elementary Dressmaking. Class 2 hours, laboratory 4 hours. Credit 31/3.

Study of textile fibers. Care of clothing. Making of undergarments and simple dress.

102 Elementary Dressmaking. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: D. A. 101.

Continuation of 101 and making of tailored skirt, waist and wool skirt.

201 Textiles. Class 2 hours. Credit 2.

Prerequisite: Chem. 101, 102.

Study of the fibers from raw materials to finished cloth.

Text: Textiles, Woolman and McGowan.

203 History of Costume. Class 2 hours. Credit 2.

Dress of primitive people down to modern times. Effect of political influences on costume.

204 Costume Designing. Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{2}$ .

Prerequisite: D. A. 203.

Study of the figure. Sketching dresses and hats for different types.

301 Tailoring. Laboratory 2 hours. Credit 3/3.

Prerequisite: D. A. 101, 102. Problem: Making a coat.

302 Advanced Dressmaking. Laboratory 4 hours. Credit 11/3.

Prerequisite: D. A. 303.

Problem: Making an evening dress.

- 303 Drafting and Crinoline Modeling. Laboratory 2 hours. Credit 3/3.
- 304 Art Needlework. Laboratory 4 hours. Credit 11/3.

Ornamental and crocheting stitches and their application to various articles.

401 Millinery. Class 1 hour, laboratory 4 hours. Credit 21/3.

Construction of buckram and wire frames. Covering buckram shapes with velvet. Making trimmings and placing. Renovation of materials.

402 Millinery. Class 1 hour, laboratory 2 hours. Credit 1%. Continuation of D. A. 402.

Wire frames covered with braid, and lace hats made.

404 Home Decoration and Furnishing. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: A. E. 403 (house planning); Dr. (Sophomore).

Interior decoration and furnishing of house planned in A. E. 403. Particular attention given to color combinations for rooms in regard to location and relation to each other; also style of furniture for different types of houses.

## THE SCHOOL OF SCIENCE AND LITERATURE

L. L. LEWIS, Dean

The courses in The School of Science and Literature offer a sound basis for scientific training in mathematical, physical and biological sciences. It is also believed that one's education should include a study of some of the subjects such as history and social science, which tend to a better understanding of one's duties as a citizen, and give a broad, liberal view of the relations of the individual to society.

The course requires the student to take such subjects as are fundamental, as these same subjects form the basis of all of the courses given in the institution. Where other courses offer vocational subjects, the science and literature course offers, by means of groups of electives, opportunities for further work in languages and in the sciences. Such opportunities meet the needs of students desiring a liberal education as a foundation for such professional courses as law or medicine, or who are preparing themselves particularly for work requiring thorough training in one or more of the sciences, or who have not fully decided on their vocation, but desire to secure training that is well balanced in respect to literature, modern science and cultural subjects.

# Elective System

It will be noted from the course that follows that certain electives are begun in the Sophomore year; that approximately one-half of the time of the Junior and Senior years must be devoted to a language and a science, and that the remainder of the work may be selected from the various groups of studies indicated as electives. This arrangement will give continuous work in a language and a major science while it offers opportunities for electing minor subjects more or less closely related to those selected as majors.

# Relations to Other Schools

Besides the instruction given to students in The School of Science and Literature, the instructional force gives much of the collateral work offered in other Schools. Among the courses offered to students of The School of Science and Literature are many from departments of other Schools in the College.

## Equipment

The various departments of The School of Science and Literature are well equipped for the work offered. The laboratories for scientific work are especially well equipped with such instruments and other apparatus needed for this work. For further information regarding equipment, see announcements of the various departments following the outline of the course of study.

## COURSES IN THE SCHOOL OF SCIENCE AND LITERATURE

The following outline of study represents the required and elective work in the School of Science and Literature. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly—two hundred for Sophomore, three-hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate, a student must earn 36 credits per year, or a total of 144 credits, not including any credit given for military science or physical training. Students will not be allowed to register in less than fifteen nor more than twenty credit hours, except by special permission. Sophomore electives are open to Juniors, and the electives above the Sophomore year are open to Juniors and Seniors where the necessary prerequisite work is taken.

In the outline below, figures without parenthesis indicate hours of classwork; in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

Chem. 101, Inorganic	Credits. 4 1-3 4 4 4 3 2-3 2-3 2-3 2-3 2-3	Chem. 102, Inorganic	Credits. 4 1-3 4 4 4 2-3 2-3
Eng. 103, Library	1-3 2-3	Phys. Edu(3)	2-0

#### SOPHOMORE YEAR

## Required Subjects

FIRST SEMESTER		SECOND	SEMESTER	
	Credits.			urs. Credits.
Eng. 201, Exposition and	-	Eng. 202, Descripti		2
Argumentation 2	-	or		2
Eng. 203, News Writing. 2 Phy. 203, General 3 (4)	2	Eng. 204, Magazin		
Phy. 203, General 3 (4)	4 1-3	Writing	2	2
Zool. 201, General 3 (4)	4 1-3	Phy. 204, General Bot. 102, General.	3	(4) 4 1-3 (4) 3 1-3
Bot. 101, General	3 1-3	Hist. 202, Advance	d	(4) 31-3
Physical Education		American		3
(Girls)(3)		Military Science (		(3)
		Physical Education		(2)
		(Girls)		(3)

#### Elective Subjects

FIRST SEMESTER			SECOND SEMES	TER	
He	urs.	Credits.		Hours.	Credits.
Home Econ. 201, Food			Home Econ. 202, Food		
	(4)	3 1-3	Study	2	2
Chem. 203, Quantitative Analysis	(4)	2 1-3	Chem. 204, Quantitative Analysis		1 2-3
Chem. 201, Qualitative	(4)	2 1-3	Chem. 202, Qualitative	1 (2)	1 2-0
Analysis 1	(2)	1 2-3	Analysis		2 1-3
Math. 203, Theory of			Math. 104, Analytics	3	3
Eng. 207, Survival of		3	Eng. 208, Survey of English Literature	A	A
English Literature 4		4	Lat. 202. Cicero		4
Lat. 201, Cicero 4		4	or		
C- 002 C			Ger. 204, Composition		2-3
Ger. 203, Composition 4 Eng. 221, Public		4	Eng. 222, Debating Eng. 206, Current	(2)	2-3
Speaking	(2)	2-3	Literature	1	1
Eng. 205, Current			Zool. 204, Field	2 (4)	3 1-3
Literature 1		1	Math. 204, Astronomy	3	3
Music is optional in bo	th s	emesters.			

#### Music is optional in both semesters.

### JUNIOR AND SENIOR YEARS

#### Required Subjects

One language and one science to be carried throughout both years. One college course in history (2 or 3 hours) must be taken in Junior year, first and second semesters.

### JUNIOR YEAR

FIRST	SEMESTER

SECOND SEMESTER

A Major Science and One Language A Major Science and One Language

#### SENIOR YEAR

FIRST SEMESTER

SECOND SEMESTER

A Major Science and One Language A Major Science and One Language

The above work is required and shall represent continuous work in a language and some science designated as a major science. Mathematics may be elected as a science.

#### Elective Subjects

Twenty to twenty-five percent of the work is to be elected from one of the six groups of electives given below, the remainder of the work to be taken from the group of free electives or from any other electives offered in the Junior and Senior years.

#### JUNIOR AND SENIOR ELECTIVES

#### Group I-Biological Sciences

FIRST SEMESTE	R		SECOND SEMESTER
I	Hours.	Credits.	Hours. Credits.
Bact. 301, General 3	(4)	4 1-3	Bact. 302, Soil 2 (4) 3 1-3
Bact. 401, Sanitary			Bact. 304, Dairy 2 (4) 3 1-3
Biology 2 Bact. 403, Technical 2	(4)	3 1-3	Bact. 402, Sanitary
Bact. 403, Technical 2	(4)	3 1-3	Science 3 3
Bot. 201, Plant			Bact. 404, Immunity 3 (4) 4 1-3
Physiology 2	(4)	3 1-3	Bot. 202, Genetics 2 (4) 3 1-3
Bot, 301, Plant			Bot. 302, Systematic 1 (6) 3
Pathology 2	(4)	3 1-3	Hort. 402, Landscape
Hort, 303, Forestry	(3)	1	Gardening 3 (2) 3 2-3
Zool. 301, Histology 2		3 1-3	Zool. 302, Comparative
Zool, 401, General			Anatomy 2 (4) 3 1-3
Biology 2	(4)	3 1-3	Zool, 402, Embryology 2 (4) 3 1-3
Phys. 201. Advanced 3		3 2-3	Entom. 302, General 3 (2) 3 2-3
Entom. 401, Agricultural			Entom. 304, Household 1 (2) 1 2-3
and Horticultural 3	(2)	3 2-3	Entom. 402, Apiculture 2 (2) 2 2-3
	,-/		Thesis 1 (6)

# Group II-History, Economics and Social Science

FIRST SEMESTER	SECOND SEMESTER
Hours. Credits.	Hours. Credits.
Econ. 201, Elements of 3 Econ. 301, Business	Econ. 302, Labor
Organization	Hist. 304, Modern
Hist, 303, United States	Europe 3 3 Hist. 302, English 3 3 Hist. 402, United States
Industrial	Hist. 402, United States
Edu. 301, Psychology 3 3 Edu. 405, Ethics 2 2	Constitution
	Edu. 302, Psychology 3 3 Edu. 406, Logic 2 2
	English Language
FIRST SEMESTER	SECOND SEMESTER
Hours, Credits.	Hours, Credits.
*Eng. 303, American Literature	Eng. 302. Feature and Publicity Writing 2 *Eng. 304, American
Eng. 301, Editorial,	*Eng. 304, American
Publicity Work	Literature 3 3*Eng. 306, English
Language2 2	Language
Language	Language
Public Address (2) 2-3	Tennyson and Browning
Eng. 401, Vic. Essayists, Carlyle and Ruskin 3 Eng. 403, Romantic	Eng. 404, Shakespeare
Eng. 403, Romantic	and Drama
Movement	Eng. 400, The Novel 2
	each year. Courses 303, 304 will be offered
	77
· ·	-Foreign Languages
FIRST SEMESTER	SECOND SEMESTER
Hours. Credits.	Hours. Credits.
Hours, Credits.	
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4	
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Tacitus 4
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301 Advanced 4 4	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Tacitus 4
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Tacitus 4
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Tacitus 4
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4	Ger. 302, Masterpieces 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Teachers Course 4 Fr. 202, Beginners' 4 Fr. 302, Advanced 4 Sp. 302, Advanced 4 Sp. 302, Advanced 4
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Group V—F	Ger. 302, Masterpieces. 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Teachers Course 4 Fr. 202, Beginners' 4 Fr. 302, Advanced 4 Sp. 202, Beginners' 4 Sp. 302, Advanced 4 Chysical Sciences
Ger. 301, Masterpieces 4 Ger. 401, Schiller	Ger. 302, Masterpieces 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Teachers Course 4 Fr. 202, Beginners' 4 Fr. 302, Advanced 4 Sp. 202. Beginners' 4 Sp. 302, Advanced 4 Sp. 302, Advanced 4 Sp. 302, Seminers' 4 Sp. 302, Semi
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Fr. 301, Credits.	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 202. Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Croup V—F	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 202, Beginners' 4 4 Sp. 202, Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.  Chem. 302, Assaying and
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Croup V—F	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Sp. 301, Determinative 4  Group V—F  FIRST SEMESTER  Hours. Credits.  Chem. 301, Determinative Mineralogy and Blowpipe Analysis 1 (4) 21-3 Chem. 303, General	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 202 Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.  Chem. 302, Assaying and Valuation (a continuation and application of Determinative Min. &
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Sp. 301, Determinative 4  Group V—F  FIRST SEMESTER  Hours. Credits.  Chem. 301, Determinative Mineralogy and Blowpipe Analysis 1 (4) 21-3 Chem. 303, General	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 202. Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.  Chem. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis)
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Sp. 301, Determinative 4  Group V—F  FIRST SEMESTER  Hours. Credits.  Chem. 301, Determinative Mineralogy and Blowpipe Analysis 1 (4) 21-3 Chem. 303, General	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.  Chem. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis)
Ger. 301, Masterpieces 4 4 Ger. 401, Schiller 4 4 Lat. 301, Virgil 4 4 Lat. 401, Horace 4 4 Fr. 201, Beginners' 4 4 Fr. 301, Advanced 4 4 Sp. 201, Beginners' 4 4 Sp. 301, Advanced 4 4 Sp. 301, Advanced 4 4 Sp. 301, Determinative 4  Group V—F  FIRST SEMESTER  Hours. Credits.  Chem. 301, Determinative Mineralogy and Blowpipe Analysis 1 (4) 21-3 Chem. 303, General	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Sp. 302, Advanced 4 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.  Chem. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis)
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Determinative  Group V—F  FIRST SEMESTER  Hours, Credits.  Chem. 301, Determinative  Mineralogy and Blowpipe Analysis 1 (4) 21-3 Chem. 305, Organic Analytical 1 (4) 21-3 Chem. 311, Organic 3 (4) 41-3 Chem. 313, Physiologic 1 (4) 21-3 Chem. 313, Physiologic 1 (4) 21-3 Chem. 317, Seminar 1 Chem. 317, Seminar 1 Chem. 317, Seminar 1 Chem. 401, Advanced	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 302. Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis 1 (4) 21-3 Chem. 304, General Quantitative Analysis 1 (4) 21-3 Chem. 306, Organic Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Determinative  Hours, Credits.  Chem. 301, Determinative  Mineralogy and Blowpipe Analysis 1 Chem. 303, General Quantitative Analysis 1 Chem. 305, Organic Analytical 1 Chem. 311, Organic 3 Chem. 313, Physiologic 1 Chem. 317, Seminar 1 Chem. 401. Advanced Inorganic 2 Loganic 2 Loganic 2 Loganic 2 Loganic 3 Loganic 4 Loganic	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 302. Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis 1 (4) 21-3 Chem. 304, General Quantitative Analysis 1 (4) 21-3 Chem. 306, Organic Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Determinative  Group V—F  FIRST SEMESTER  Hours, Credits.  Chem. 301, Determinative  Mineralogy and Blowpipe Analysis 1 (4) 21-3 Chem. 305, Organic Analytical 1 (4) 21-3 Chem. 311, Organic 3 (4) 41-3 Chem. 313, Physiologic 1 (4) 21-3 Chem. 313, Physiologic 1 (4) 21-3 Chem. 317, Seminar 1 Chem. 317, Seminar 1 Chem. 317, Seminar 1 Chem. 401, Advanced	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 302, Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis 1 (4) 21-3 Chem. 304, General Quantitative Analysis 1 (4) 21-3 Chem. 306, Organic Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Determinative  Hours, Credits.  Chem. 301, Determinative  Mineralogy and Blowpipe Analysis 1 Chem. 303, General Quantitative Analysis 1 Chem. 305, Organic Analytical 1 Chem. 311, Organic 3 Chem. 313, Physiologic 1 Chem. 317, Seminar 1 Chem. 401. Advanced Inorganic 2 Loganic 2 Loganic 2 Loganic 2 Loganic 3 Loganic 4 Loganic	Ger. 302, Masterpieces 4 4 Ger. 402, Schiller 4 4 Lat. 302, Tacitus 4 4 Lat. 402, Teachers  Course 4 4 Fr. 202, Beginners' 4 4 Fr. 302, Advanced 4 4 Sp. 302. Beginners' 4 4 Sp. 302, Advanced 4 4 Sp. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis 1 (4) 21-3 Chem. 304, General Quantitative Analysis 1 (4) 21-3 Chem. 306, Organic Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Determinative  Hours, Credits.  Chem. 301, Determinative  Mineralogy and Blowpipe Analysis 1 Chem. 303, General Quantitative Analysis 1 Chem. 305, Organic Analytical 1 Chem. 311, Organic 3 Chem. 313, Physiologic 1 Chem. 317, Seminar 1 Chem. 401. Advanced Inorganic 2 Loganic 2 Loganic 2 Loganic 2 Loganic 3 Loganic 4 Loganic	Ger. 302, Masterpieces 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Teachers  Course Fr. 202, Beginners' 4 Fr. 302, Advanced 4 Sp. 302, Beginners' 4 Sp. 302, Advanced 4 Sp. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis 1 Chem. 304, General Quantitative Analysis 1 Chem. 306, Organic 1 Chem. 306, Agricultural Analysis 1 Chem. 307, Food 1 Analysis 1 Chem. 310, Food 1 Analysis 1 Chem. 312, Organic 1 Chem. 314, Physiologic 1 Chem. 315, Seminar 1 Chem. 318, Seminar 1 Chem. 402, Physical 2 Chem. 404, Advanced 2 Chem. 402, Physical 2 Chem. 404, Advanced 2 Chem. 404, Advanced 2 Chem. 404, Advanced 4 Chem. 404, Advanced .
Ger. 301, Masterpieces 4 Ger. 401, Schiller 4 Lat. 301, Virgil 4 Lat. 401, Horace 4 Fr. 201, Beginners' 4 Fr. 301, Advanced 4 Sp. 201, Beginners' 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Advanced 4 Sp. 301, Determinative  Hours, Credits.  Chem. 301, Determinative  Mineralogy and Blowpipe Analysis 1 Chem. 303, General Quantitative Analysis 1 Chem. 305, Organic Analytical 1 Chem. 311, Organic 3 Chem. 313, Physiologic 1 Chem. 317, Seminar 1 Chem. 401. Advanced Inorganic 2 Loganic 2 Loganic 2 Loganic 2 Loganic 3 Loganic 4 Loganic	Ger. 302, Masterpieces 4 Ger. 402, Schiller 4 Lat. 302, Tacitus 4 Lat. 402, Teachers  Course  Course  Fr. 202, Beginners' 4 Fr. 302, Advanced 4 Fr. 302, Advanced 4 Sp. 302, Advanced 4 Sp. 302, Advanced 4 Chysical Sciences  SECOND SEMESTER  Hours. Credits.  Chem. 302, Assaying and Valuation (a continuation and application of Determinative Min. & Blowpipe Analysis 1 (4) 21-3 Chem. 304, General Quantitative Analysis 1 (4) 21-3 Chem. 308, Agricultural Analysis 1 (4) 21-3 Chem. 310, Food Analysis 1 (4) 21-3 Chem. 310, Food Analysis 1 (4) 21-3 Chem. 314, Physiologic 1 (4) 21-3 Chem. 314, Physiologic 1 (4) 21-3 Chem. 312, Organic 1 (4) 21-3 Chem. 318, Seminar 1

#### Group VI-Mathematics

FIRST SEMESTER	SECOND SEMESTER				
Moth 201 Colombia Hours. Credit.	Hours. Credit.				
Math. 201, Calculus 4 4 Math. 205, Spherical	Math. 202, Calculus 4 4 Math. 302, Differential				
Trigonometry	Equations 3				
Equations 3					
Math. 303, Least Square 1					
Math. 401, Analytical					
Geometry of Three Dimensions					

### Unclassified Electives

	_	nerassined	Licetives				
FIRST SEMEST	ER			SECOND	SEMEST	ER	
Education, Pedagogy Music Agriculture Plays and Games (Girls) Wood Carving	3 1 (2) 2 (4)	Credit. 3 1 2-3 3 1-3 1 1 1-3	Education, Music	Physical		3 1 (2) 2 (4) 1 (4)	Credit. 3 1 2-3 3 1-3 2 1-3

### DEPARTMENT OF ZOOLOGY AND BACTERIOLOGY

L. L. LEWIS, Professor C. H. McElroy, Assistant W. P. SHULER, Assistant R. O. WHITENTON, Assistant G. B. Merry, Assistant

The Department of Zoology and Bacteriology occupies quarters in the Library Building. The equipment consists of thirty Zeiss and Leitz microscopes with oil immersion lenses, microtomes, dissecting instruments and cameras.

The department is also well supplied with dissectable models of various animals, including an Azoux model of the horse, skeletons and charts for lecture room work. A good working collection of museum specimens is at hand for work in zoology, etc. For the work in physiology there are skeletons of the human body, manikins, charts, models, etc. The following work is offered by the department in the regular College courses:

# **SUBJECTS**

## ZOOLOGY

201 General Zoology. Class 3 hours, laboratory 4 hours. Credit 41/3.

General classification of the animal kingdom and dissection of types of each phylom.

202 Economic Zoology. Class 2 hours, laboratory 4 hours. Credit 3½.

Similar to 201, with emphasis on economic value.

204 Field Zoology. Class 2 hours, field work 4 hours. Credit 31/3.

The vertebrates of Oklahoma will be classified and the distribution and economic values of birds and reptiles will receive special attention. 206 Genetics. Class 3 hours. Credit 3.

A course dealing with experimental study of genetics and its relation to development.

301 Histology. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Zool. 201 or 202.

302 Comparative Anatomy of the Vertebrates. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: Zool, 201 or 202.

Dissection of the types of vertebrates and comparison with other existing and extinct forms.

401 General Biology. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Zool. 201 or 202.

A general study of the problems of evolution, inheritance, variation, etc., will be made.

402 Embryology. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Zool. 201 or 202.

A study of the development of vertebrates, using the chick and pig as types.

#### PHYSIOLOGY

201 Advanced Physiology. Class 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: Secondary School Phys., and Chem. 101-102.

Particular attention is given to the physiology of nutrition, with experiments on digestion, etc.

### BACTERIOLOGY

301 General Bacteriology. Class 3 hours, laboratory 4 hours. Credit 4½.

This course covers the general principles of the science and enables the student to comprehend the importance of bacteria as related to disease, their economy in nature, and relation to the various industries. This course is a prerequisite to all courses in Bacteriology, except 303.

Text: General Bacteriology, Muir and Ritchie.

302 Soil Bacteriology. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

This work includes studies of the relation of bacteria to agriculture and soil fertility.

No text.

303 Household Bacteriology. Class 2 hours, laboratory 4 hours. Credit 3½.

An introductory course to bacteriology, including such work as sterilizing, cultivation and physiology of bacteria, yeasts, etc.

Text: Household Bacteriology, Buchanan.

304 Dairy Bacteriology. Class 2 hours, laboratory 4 hours. Credit 3½.

A study of the bacteriology of milk and the dairy industry in general,

401 Sanitary Biology. Class 2 hours, laboratory 4 hours. Credit 31/3.

The different phases of municipal hygienic laboratory problems, including drainage, surface water and sewerage disposal, and their relation to the spread of infectious agencies is discussed. The laboratory work in connection includes bacteriological analyses and chemical tests as employed in the routine work of the board of health.

No text.

402 Sanitary Science. Class 3 hours. Credit 3.

This course is given especially for civil engineers and deals with the relationship between engineering, sanitation and the arrangement of water supplies and sewerage, sewerage disposal with reference to their bearing on public health. Septic tanks and water purification methods are discussed, and class demonstrations include various bacteriological apparatus and disease-producing organisms.

No text.

**403 Technical Bacteriology.** Class 3 hours, laboratory 2 hours. Credit 3%.

This course is a continuation of 301, and deals with the relationship of bacteria and disease processes. Work is offered in the preparation of vaccines, antitoxins and other bacterial products of therapeutic value.

Text: Immune Sera-Bolduan; Immunity, Citron and Garbott.

404 Advanced Work in Immunity. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: 301-306.

This semester's work completes a one-year course in technical bacteriology in which the student is given theoretical and practical training in work along sero-diagnostic and immunological lines. This course preeminently fits a student for municipal or Federal work.

Text: Infection and Immunity, Simon; Studies on Immunization, Wright; Immunity, Citron and Garbott.

### DEPARTMENT OF CHEMISTRY

HARDEE CHAMBLISS, Professor J. F. G. HICKS, Associate Professor V. T. JACKSON, Assistant H. E. REDENBAUGH, Assistant

The chemistry course as a whole is designed to give the student considerable familiarity with carefully selected chemical facts, and upon these facts as a basis to build up his conceptions of the principles, theories and laws which underlie the chemical science of today. That he may better appreciate the value of the subject to mankind in the past and present, some attention is paid to the history of the subject and to the modern applications in the industries and the arts. That he may be able to read current chemical literature intelligently and thereby "keep up with the times", the most modern theories are presented.

Furthermore, since nearly every practical chemist begins as an analyst, and many make analysis their life work, great stress is laid on analytical training. The realization of chemical laws and theories which comes to the student during analytical work constitutes an excellent preparation for teaching the more elementary branches of the subject. The science of quantitative analysis is taken up along with a thorough drill in the practical side of quantitative work. It is the policy of the department to have its graduates well drilled in the scientific side of analytical chemistry, both qualitative and quantitative, and the operations involved in the actual analysis of a variety of substances are carefully supervised by the instructors.

The department is located in the Chemistry Building, which consists of two stories, basement and attic. One of the large, bright rooms on the first floor is fitted up for lectures and recitations. There is a lecture table conveniently equipped and arranged for demonstration and observation. The supply of apparatus and chemicals is quite extensive, and the student's interest in the subject is first aroused then encouraged and stimulated. The lecture room has a seating capacity of over one hundred. The remainder of the first floor is taken up with laboratories and balance rooms for quantitative work.

On the second floor there are three laboratories for introductory work. Each of these is equipped for a total of seventy-two workers, and will accommodate twenty-four students at a time; a central storeroom opens into all three. During the working period there is an instructor in each laboratory and an advanced student in the storeroom. This arrangement has proved very efficient for laboratory instruction. All desks are so equipped with bottles of reagents and with apparatus as to minimize the loss of time incident to a student leaving his desk for these articles; and even in the case of more expensive instruments, materials and models for advanced students, every effort is made to keep on hand a supply that will meet all reasonable demands and prevent the serious loss of time and enthusiasm on the part of the student.

In the attic there are the general storerooms for apparatus and chemicals. These communicate with and supply the special storerooms and laboratories below by means of an elevator.

The building is heated by steam, and the gas for light and for experimental use comes from a Tirrell equalizing gas machine in the basement. The basement of the building contains a storeroom, a classroom and one large laboratory.

In general it may be said that it is the policy of the department to maintain at all times those conditions which promote orderly and serious work, and which cultivate a pleasurable interest in scientific experimentation.

# SUBJECTS\*

101-102 General Inorganic Chemistry and Qualitative Analysis.

Class 3 hours, laboratory 4 hours. Credit 41/3 per semester.

It is assumed that students entering this course have had instruction in elementary physics; it is advised that they also have some knowledge of elementary chemistry. During the first semester the study of the non-metallic elements is taken up, with particular emphasis on those chemical properties and transformations which illustrate general principles. In the second semester the metallic elements are studied, not only from the standpoint of their general behavior, but also of their characteristic analytical reactions.

201,-202 Qualitative Analysis. Class 1 hour both semesters; laboratory 2 hours first semester, 4 hours second semester. Credit 12/3 first semester; 21/3 second semester.

Prerequisite: 101-102.

This course consists on the one hand of classroom study of analytical reactions and their representation by equations, and, on the other hand, of analytical study of the more common metallic and non-metallic elements and their more important compounds in the qualitative way. Analytical problems for experimental solution will be emphasized particularly during the second semester, and will include some elementary work along the line of qualitative organic analysis.

203-204 General Quantitative Analysis (Elementary). Class 1 hour both semesters, laboratory 4 hours first semester, 2 hours second semester. Credit 2½ first semester, 1½ second semester. Prerequisite: 101-102.

In the classwork such theoretical considerations as equilibrium, mass-action and their application in separations by precipitation and other methods are considered. Special attention is given to the solution of problems in chemical arithmetic stoichiometry with their application to quantitative analytical work in the laboratory. The care and use of the analytical balance, the study of simple problems in gravimetric analysis, the use of volumetric apparatus, the preparation of standard solutions, and the simple problems of volumetric analysis are all studied in the laboratory.

<sup>\*</sup>Elective courses in chemistry, on account of the large number offered, will be given only to classes of sufficient size, upon recommendation of the head of the department, and the approval of the Dean.

205 Elementary Organic Chemistry. Class 2 hours; one-semester course. Credit 2.

The sole purpose of this course is to give to students of agriculture and home economics an insight into the subject of organic chemistry. The study of agricultural chemistry and of food chemistry call for some instruction in organic chemistry as prerequisite, and this course is planned to meet this need. The study of alcohols, aldehydes, ketones, esters and the organic derivatives of ammonia is taken up most carefully, since these compounds are so closely related to the carbohydrates, fats and proteins.

206 Introduction to Agricultural Chemistry. Class 3 hours, laboratory 4 hours, second semester only. Credit 41/3.

Prerequisite: 203, 205.

A survey of the borderland between the fields of chemistry and agriculture. It involves the study of the chemical composition of the atmosphere, soils fertilizers, feeds and various other agricultural products and the laboratory preparation of some type compounds along these lines.

208 Introduction to Food Chemistry. Class 1 hour laboratory 4 hours; second semester only. Credit 21/3.

Prerequisite: 203, 205.

In this course the more common foods and food products are considered from the chemist's viewpoint. Attention is given to those chemical compounds found in ordinary foods upon which the food value depends, and the chemical properties and transformations of these compounds are studied in so far as they relate strictly to their food value.

215-216 The Chemistry of Structural Materials—Metals and Alloys.
Class 1 hour, laboratory 4 hours. Credit 2½ per semester.

Prerequisite: 101-102.

The methods of manufacture of the principal structural metals, such as iron, steel, copper, etc., constitute the class work. In the laboratory the quantitative determination of the more common and the more undesirable impurities is studied.

301 Determinative Mineralogy and Blowpipe Work. Class 1 hour, laboratory 4 hours. Credit 2½.

Prerequisite: 201, 202.

A study of the dry reactions of the elements followed by the application of these reactions (together with other physical and chemical tests) to the identification of mineral specimens. Special attention will be given to field methods.

302 Assaying and Ore Valuation. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: 301.

This course is largely the quantitative application of course 301, and will include fire assays of the ores of lead, gold and silver (including inquartation and parting), also the wet assays of the ores of lead, iron, copper, zinc and manganese. Brief discussions of the metallurgy of these metals will be introduced in class from time to time.

303-304 General Quantitative Analysis (Intermediate Course). Class 1 hour, laboratory 4 hours. Credit 2½ per semester.

Prerequisite: 203, 204.

This course is the continuation and amplification of courses 203-204, along the lines of inorganic quantitative analysis.

305-306 General Organic Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: 203-204.

The qualitative and quantitative analysis of the simple organic materials, including brief discussions in class of the importance of the materials studied, and their relation to the arts and industries, to the medical, biological and allied sciences.

307-308 Agricultural Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: 203.

The qualitative and quantitative study of the simpler materials of agricultural chemistry, more particularly those prepared in connection with course 206.

310 Food Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: 203.

The qualitative and quantitative analysis of the simpler food materials.

311-312 Organic Chemistry. Class 3 hours, laboratory 4 hours. Credit 4½,

Prerequisite: 101-102.

The class work and to some extent the laboratory work consists of the theoretical discussion of the different hydrocarbons and their more important derivatives. Preparation and purification of typical organic substances will be conducted in the laboratory.

313-314 Physiological Chemistry. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: 101-102, 205.

The application of chemistry to physiology, which involves the study of the chemical changes that are associated with such vital processes as digestion, assimilation and excretion, is taken up. Special attention will be devoted to the chemistry and physiology of nutrition, since the course is intended primarily for students of home economics.

By those who cannot offer courses 205 as prerequisite, it must be taken concurrently.

315-316 The Chemistry of Structural Materials. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: 101-102.

Compound substances as distinguished from metals and alloys studied in 215-216.

The chemical examination of lime, cement, sand, brick, tile, building stone, etc., with special reference to relationship between chemical composition and physical properties.

317-318 Seminar. Class 1 hour. Credit 1 per semester.

Prerequisite: 101-102, 205 or 311 must be taken concurrently.

Weekly reports by students on current chemical literature, together with at least one report each week on some assigned topic in historical chemistry. An occasional review of some new book in chemistry will be called for.

401 Advanced Inorganic Chemistry. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: 101-102, and not less than two semesters of analytical chemistry.

The course will consist of a review of the more important chemical properties and reactions studied in the more elementary courses. A classification of these facts, together with a study of the principal theories of which they constitute the foundation, will be taken up later in the course. The laboratory work will include some more advanced inorganic preparation with a few experiments illustrating the more important phases of chemical industry.

402 Physical Chemistry. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: 401.

A study of the borderland between the fields of chemistry and physics, with special attention to the theoretical considerations common to both sciences. The laboratory work will be correlated as closely as possible.

403-404 General Quantitative Analysis (Advanced Course). Class 1 hour, laboratory 4 hours. Credit 2½ per semester.

Prerequisite: 303-304.

Continuation and amplification of the work in quantitative analysis as performed in 303-304, and will include some work in quantitative organic analysis.

407-408 Agricultural Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3 per semester.

Prerequisite: 307-308.

A continuation and amplification of the work done in course 307-308, viz, the quantitative study of agricultural materials—soils, fertilizers, feeds, insecticides, dairy products and the like.

409-410 Food Analysis. Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

Prerequisite: 310.

Further study of the quantitative analysis of foods. Detection and estimation of impurities, adulterants, preservatives, coloring matters, etc.

415-416 Municipal Chemistry. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: 101-102.

This course is open only to those who are particularly well qualified and whose application for it is approved by the head of the department.

This course deals with the problems that come up for solution by the man who is employed as city chemist. All problems affecting the welfare of the community are his problems in so far as the chemist may contribute to their satisfactory solution. Among these may be mentioned the chemical and hygienic phases of food and water supplies for large cities, pure air, suitable fuel, proper ventilation of public buildings, structural materials (including paints, paving materials and the like).

419-420 The Teaching of Chemistry. Class 1 hour. Credit 1 per semester.

It is believed that the undergraduate who looks forward to a teacher's career should receive instruction not only in those branches, such as pedagogy and psychology, in which broad general principles underlying all educational work are discussed, but he should also become acquainted with the teaching problems peculiar to the particular subject which he expects to teach.

421-422 Thesis. Class 1 hour, laboratory 8 hours. Credit 32/3.

The work under this head will chiefly consist of a problem for solution by the student. Each such problem will involve about a year of careful experimental study, together with collateral reading and occasional conferences. The work is intended to cultivate the powers of the student, more particularly his self-reliance, his ability to do independent work, and familiarity with the interpretation of experimental results.

320 Geology. Class 2 hours. Credit 2.

The purpose of this course is to place before the student certain facts and principles which, together with other principles already in hand, will enable him to consider from a geological point of view such engineering problems as railroad cuts and tunnels, ore deposits and the action of rivers and winds on the general topography of the locality where he is carrying on his operations. A survey of the principles of dynamic, structural and economic geology, together with the recognition and study of the principal rocks, rock-forming minerals and ores, constitutes the plan upon which this course is based.

## DEPARTMENT OF ENTOMOLOGY

C. E. SANBORN, Professor H. R. PAINTER, Assistant

This department is well equipped with all necessary apparatus for carrying on investigation or research in the theory and practice of insect control.

The museum contains a systematic collection of the common injurious and beneficial insects of Oklahoma. The life history of these is arranged in such a manner as to present the student with a concrete view of the various stages of their development. The collection is being constantly increased, not only by the men in charge of the department, but also by students who take work in the department.

All up-to-date types of spraying machinery which are used for combating insects and diseases of plants in general are owned by the department. In the practice work of spraying plants and trees, the students are not only taught how to use the machines, but in addition thereto are taught how to prepare the spray fluids which are used for controlling various diseases and insects.

An apiary is also owned by the department, and in some of the regular courses of study, instruction in bee culture is given. This instruction is, of course, primary, and the practice consists largely of acquainting the student with the apparatus used in bee culture, as well as the actual use of the same.

In studying the life history of insects, students are supplied with all necessary material, such as cages and other apparatus, necessary for making a full and complete investigation of any important topic in this department.

# SUBJECTS

302 General Entomology. Class 3 hours; field and laboratory 2 hours. Credit 3%.

A systematic study of insects, also a study of their distribution, habits and methods of development.

Text: Hunter.

304 Sanitary Entomology. Class 1 hour; field and laboratory 2 hours. Credit 1%.

A brief, systematic study of insects, and a study of the life histories and habits of the forms which may disseminate disease and infest the household. Methods of control are given in detail.

Text: Herrick.

401 Agricultural and Horticultural Entomology. Class 3 hours; field and laboratory 2 hours. Credit 3%.

The habits and distribution of field crop, orchard and garden insects are studied in such a way as to portray the most practical methods of controlling them.

Text: Sanderson.

402 Apiculture. Class 3 hours; field and laboratory 2 hours. Credit  $3\frac{2}{3}$ .

A general course in beekeeping.

Text: Root.

403 Advanced Entomology. Class 2 hours; field and laboratory 4 hours. Credit 3½.

#### DEPARTMENT OF ENGLISH

N. W. Rockey, Associate and Professor in Charge
HARRY R. O'BRIEN, Instructor
I. Samuels, Instructor
Albert H. Nelson, Assistant
Lawrence A. Wachs, Assistant
Mary Bell Barlow, Assistant
Nellie Rockey, Assistant

A number of improvements have been made recently which enable the Agricultural and Mechanical College to keep pace with the constantly increasing attention that is being paid to English in other institutions; large, beautiful recitation rooms on the second floor of the new Engineering Building have been given over to the use of this department, the teaching force in the department has been increased, and a large number of books for supplementary reading and reference have been added to the library. New courses adapted to the special needs of the students have been added.

The aim of the department is two-fold: (1) To create such a love in the student for the best literature that he shall continue to read and enjoy it after his school days are over; (2) to teach the student to express himself clearly and forcibly in writing and speaking.

## **SUBJECTS**

## 101, 102 Elements of Composition. Class 4 hours. Credit 4.

Prerequisite: Preparatory English.

This course consists principally of the study and practice of the principles of composition. Wooley's Handbook of Composition is studied and a thorough knowledge of the principles of grammar is essential. Frequent themes of various nature are required and a study of several classics is introduced. Emphasis is placed upon oral composition and individual conference and correction. All students must have access to an unabridged dictionary and are urged to possess a good, standard dictionary such as the New International or the Standard.

## 103 Library Reference. Class 1 hour. Credit 1/3.

Prerequisite: Preparatory English.

A practical course to familiarize students with the library, sources of information, and to enable them to do more efficient reference work. The hour is devoted to lectures and instruction one week and to actual application of this knowledge the next.

#### 105 American Writers. Class 5 hours. Credit 2.

Prerequisite: Preparatory English.

The literature itself is studied, but attention is given to the lives of the authors and to the time in which they lived in order that the students may better appreciate their work. Offered only in the Summer Term.

Text: Books adopted by the Oklahoma State Board of Educa-

tion, supplemented by texts from the College library.

#### \*121, 122 Essentials of Public Speaking. Class 2 hours. Credit 2/3.

This is an elemental course and a prerequisite to all other work in public speaking, except courses 223, 224. The fundamentals aimed at are as follows: Thought conception, power of analysis, mental grasp, self-control before the public, and effective delivery of a definite message, incidentally such technique as the voice demands, together with the correction of platform bearing, completes the course. The work is developed by practical exercises and short, original speeches.

## 201 Exposition and Argumentation. Class 2 hours. Credit 2.

Prerequisite: 101, 102,

An advanced course in composition, supplemented by a study of examples taken from literature.

## 202 Description and Narration. Class 2 hours. Credit 2.

Prerequisite: 101, 102,

An advanced course in composition, supplemented by a study of examples taken from literature.

#### 203 News Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

A study of the elements of news writing and style form the basis of the work. Proper attention is given to writing leads, structure of news stories, reporting and gathering of news, interviewing, reporting speeches, and other forms of elementary journalism.

Text: "Essentials in Journalism", Harrington and Frankenberg, supplemented by "Typical News Stories", Harrington.

## 204 Magazine Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102, 203.

This course takes up the problem of turning scientific and technical information into practical articles for publication in magazines. Preparation of manuscripts and submitting them for acceptance forms part of the work. Special attention is given to agriculture and allied subjects.

Farm Writing, Neal.

#### 205, 206 Current Literature. Class 1 hour. Credit 1.

Prerequisite: 101, 102.

A course offered as an aid to more intelligent magazine reading and to stimulate an interest in the best current literature.

Text: Current magazines.

## 207, 208 Survey of English Literature. Class 4 hours. Credit 4.

Prerequisite: 101, 102.

A general survey. First semester work extends to the early Romantic Movement; second semester work, from Wordsworth to Stevenson. The principal study is of the literature itself, but enough attention is given to the life of the author and the times in which he lived to enable the student to appreciate his work and influence. It is an introduction to literature and, although it is elective to advanced students, those electing it early in their course will be enabled to pursue the more advanced courses with greater profit and success.

Text: Twelve Centuries of English Poetry and Prose, New-

comer and Andrews.

<sup>\*</sup>Courses numbered in twenties are given by the instructor of public speaking.

# 221 Practical Public Speaking. Class 2 hours. Credit 3/3. Open to Sophomores, Juniors and Seniors.

Training in the use of voice, enunciation, gesture, and general platform deportment. The aim of this course is to teach students by practical platform experience how to speak effectively. Extemporaneous speaking is especially stressed.

## 222 Debating. Class 2 hours. Credit 2/3.

Prerequisite: English 121, 122.

Practical work is given in analysis, the collection and handling of evidence, brief drawing and oral debating. Students appear in debate before the class. Methods of proof and refutation are studied. together with the elements of effective presentation upon the platform. This course will include parliamentary drill.

## 301 Editorial and Publicity Work. Class 2 hours. Credit 2.

Prerequisite: 203, 204.

Copy prepared by students in course 203 is edited for publication in student papers. Practical work is given in editing, proofreading, makeup, along with special assignments in writing. Publicity work for the College is undertaken in connection with the course.

#### 302 Feature and Publicity Writing. Class 2 hours. Credit 2.

Prerequisite: English 203, 204, 301.

Writing feature articles for newspapers and magazines forms the basis of the work. Upon arrangement a separate section is formed for those interested in the short-story and offering English 201, 202 as prerequisite. This takes up a study of the history, the structure and forms of the short story, the reading of short stories, and the writing of stories on assignment by the instructor. Editing for student publications and College publicity work is continued by those in that phase of the course.

#### \*303, 304 American Literature. Class 2 hours. Credit 2,

Prerequisite: 101, 102.

This course covers a history of American literature in a more intensive manner than is possible in secondary schools. Attention will be given to literary periods and to the writings of the lesser as well as the greater American authors. Some comparison is make with English literature.

Text: American Poems, Bronson.

#### \*305, 306 English Language. Class 2 hours. Credit 2.

Prerequisite: English 101, 102.

A college course in the structure of language, and aimed to advance and deepen the student's knowledge of grammar. Some attention is given to the historical development of forms and to word

study.

Text: A Brief History of the English Language, Emerson; Words and Their Ways, Greenough and Kittridge.

## 321 Forms of Public Address. Class 2 hours. Credit 2/3.

Prerequisite: 121, 122.
This course deals with the structure of the more important kinds of public addresses, including the eulogy, after-dinner speech, political speech, and speech for special occasions. Practice will be given in the composition and presentation of these forms.

\*Only one of the following subjects is offered in each year: Courses 303-304, 305-306, 405-406. Courses 303-304 will be offered in 1915-16.

## 321b A Section of 321 in Fundamentals of Vocal Expression.

Optional with 223, 224, 321.

It is a course for women in expressional reading, and is open only by special arrangement.

## 401 Carlyle and Ruskin. Class 3 hours. Credit 3.

Prerequisite: English 101, 102.

The assignment in this work varies from year to year. This year the following will be studied: Carlyle's "Heroes and Hero Worship" and "The Heroic in History"; Ruskin's "Selected Essays". Although not a prerequisite, students should have had English 207 and 208.

Text: For Carlyle, the Athenaeum edition; for Ruskin, the Riverside edition.

## 402 Victorian Poets. Class 3 hours. Credit 3.

Prerequisite: 101, 102.

This course is designed to give students a comparatively thorough knowledge of one of the master poets of the Nineteenth Century. This does not exclude the consideration of other authors as an aid to the study of the author chosen. This year, Tennyson has been selected for intensive study. Although not a prerequisite, students should have had English 207, 208.

# 403 Romantic Movement in English Poetry. Class 3 hours. Credit 3. Prerequisite: English 101, 102.

About one-fourth of the time is devoted to Wordsworth, the remainder to Coleridge, Byron, Shelley and Keats. This course is supplemented by lectures and collateral readings, tracing the rise and development of the Romantic Movement. The work is based upon the complete work of each of the authors studied. By clubbing together the students have purchased the five volumes at less than fifty cents per volume. Although not a prerequisite, students should have had English 207, 208.

## 404 Shakespeare and the Drama. Class 3 hours. Credit 3.

Prerequisite: English 101, 102.

A study is made of the rise and development of the English drama, of the Elizabethan stage, and the conditions under which the great dramatist wrote. Specimens of early English plays—Twelfth Night and Hamlet—will be studied. Other of Shakespeare's plays may be assigned to be read and reported upon, and some attention given to the later drama.

## \*405, 406 The Novel. Class 2 hours. Credit 2.

Prerequisite: English 101, 102.

In this course the development of the English novel into definiteness of form and purpose receives due emphasis, and the writers studied are treated as representatives of the life, the thought and literary movements of the times in which they lived.

\*Only one of the following subjects is offered in each year. Courses 303-304; 305-306; 405-406. Courses 303-304 will be offered in 1915-16.

#### DEPARTMENT OF MATHEMATICS

CARL GUNDERSON, Professor
R. E. HARTSOCK, Associate Professor
Z. N. HOLLER, Assistant
JOHN H. Andrews, Assistant

Work in college mathematics is required of all students in the School of Engineering and the School of Science and Literature.

Courses 101, 102, 103, 104, 201, 202 are required of engineers, 105 and 106 of Science and Literature students, 205 of civil engineers.

The other courses are elective.

## **SUBJECTS**

101 College Algebra. Class 2 hours. Credit 2.

Prerequisite: High School Algebra, Plane Geometry.

Variables and functions; mathematical induction; binomial theorem; progressions; complex numbers.

Text: Reitz and Crathorne.

102 College Algebra. Class 2 hours. Credit 2.

Prerequisite: Math. 101.

Logarithms; limits; partial fractions; permutations and combinations.

Text: Reitz and Crathorne.

103 Plane Trigonometry. Class 3 hours. Credit 3.

Prerequisite: High School Algebra and Plane Geometry.

The development and use of trigonometric functions; relations between the functions; logarithms; solution of triangles; application to practical problems throughout the course.

Text: Ashton and Marsh.

106 Plane Trigonometry. Class 3 hours. Credit 3.

Prerequisite: High School Algebra and Plane Geometry.

Work and text same as in Math. 103.

104 Analytic Geometry. Class 3 hours. Credit 3.
Prerequisite: Math. 102, 103, or Math. 105, 406.

Cartesian and polar coordinates; equations and properties of straight lines and curves, the general equation of the second degree; introduction to analytical geometry of three dimensions.

Text: Brief Course in Analytic Geometry, Tanner and Allen.

105 College Algebra. Class 3 hours. Credit 3.

Prerequisite: High School Algebra and Plane Geometry.

Variables and functions, binomial theorem; progressions; complex numbers, logarithms; limits; permutations and combinations.

Text: Reitz and Crathorne.

201 Calculus. Class 4 hours. Credit 4.

Prerequisite: Math. 104 and Solid Geometry.

The subject is developed from the method of limits; infinitesimals; rates; maxima and minima; partial differentiation; change of variable; introduction to integration.

Text: Infinitesimal Calculus, Murray.

202 Calculus. Class 4 hours. Credit 4.

Prerequisite: 201.

Application of integration; multiple integrals, curvature, properties of curves; infinite series; Taylor's theorem, hyperbolic functions, indeterminate forms.

Text: Infinitesimal Calculus, Murray.

203 Theory of Equation. Class 3 hours. Credit 3.

Prerequisite: Math. 101, 103, or Math 105, 106.

Solution of equations of third and fourth degrees; equations of higher degree; approximate methods; solution by determinants.

204 Astronomy. Class 3 hours. Credit 3.

Prerequisite: High School Algebra and Geometry.

The celestial sphere; reference lines and astronomical measurements; the solar system; laws of motion; evolution; stars; comets; nebulae; structure of the universe.

Text: Elements of Astronomy, Young.

205 Spherical Trigonometry. Class 1 hour. Credit 1.

Prerequisite: Solid Geometry and Math. 103 or 106.

Right and quadrantal triangles; oblique triangles.

Text: Ashton and Marsh.

301 Differential Equations. Class 3 hours. Credit 3.

Prerequisite: Math. 202.

Solution of differential equations involving two variables.

Text: Murray.

302 Differential Equations. Class 3 hours. Credit 3.

Prerequisite: Math. 301.

Continuation of Math. 301; ordinary differential equations, with more than two variables; partial differential equations.

Text: Murray.

303 Least Squares. Class 1 hour. Credit 1.

Prerequisite: Math. 202.

Method of finding the most probable value from a number of observations.

401 Analytic Geometry of Third Dimension. Class 3 hours. Credit 3. Prerequisite: Math. 202.

Systems of coordinates in space; equations and properties of curves and surfaces.

#### DEPARTMENT OF FOREIGN LANGUAGES

GUSTAV F. BROEMEL, Professor ALMON AI ARNOLD, Assistant

The Secondary School of Oklahoma A. and M. College requires one year of any foreign language of all students except those who are preparing for the Schools of Commerce and Marketing or Agriculture, who may elect German. In addition to this the College offers a four years' course in either German or Latin. Secondary School and College offer a two years' course in either Spanish or French.

As to which courses are required, and which elective, see the courses of study outlined for each School.

The student is allowed to take that course for which he is prepared.

#### **GERMAN**

101 Advanced Reading Course. Class 4 hours. Credit 4.

Prerequisite: One year of German.

Syntax is reviewed and studied more intensively. One hour a week will be given to composition. Reading of about two hundred pages of prose.

Text: German Composition, Paul V. Bacon; Storm's Immensee; Zschokke's Der zerbrochene Krug; Mera's Ein Wortschatz.

103 Advanced Reading Course. Class 3 hours. Credit 3.

Prerequisite: One year of German.

Same course as 101 with the one hour of composition omitted.

102 Advanced Reading Course. Class 4 hours. Credit 4.

Prerequisite: 101.

One hour a week composition reading of about two hundred pages of prose. Scientific German will be read.

Text: German Composition, Paul V. Bacon; German Scientific Reader, Wright; Mera's Wortschatz; Meyer-Forster; Karl Heinrich.

104 Advanced Reading Course. Class 4 hours. Credit 4.

Prerequisite: 103.

Same course as 102 with the one hour of composition omitted.

201 Beginners' Course. Class 4 hours. Credit 4.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Written and oral translations from English to German. Conversation.

Text: Paul V. Bacon's German Grammar.

202 Beginners' Course. Class 4 hours. Credit 4.

Prerequisite: 201.

Continuation of course 201.

Text: German Life, Philip S. Allen.

203 Advanced Composition and Conversation. Class 4 hours. Credit 4. Prerequisite: 102.

Discussion of grammatical syntactical and stylistic points. Essays on topics of German life. Systematic outside reading; a minimum of four books a semester is required. This course is intended for students who propose to become teachers of German.

Text: Brief Summary of German Grammar, Greenfield; Schil-

ler's Ballads and Lyrics.

204 Advanced Composition and Conversation. Class 4 hours. Credit 4. Prerequisite: 203.

Continuation of course 203.

Text: Ausdemdeutschen Dichterwald, Dillard; Ball's German Drill Book.

301 Masterpieces in German Drama and Novel. Class 4 hours. Credit 4.

Prerequisite: 102.

Reading occupies most of the time. Composition is continued.

Text: German Composition, Harris; Felix Dahn's Ein Kampf um Rom; Goethe's Hermann and Dorothea. Texts vary.

302 Masterpieces in German Drama and Novel. Class 4 hours. Credit 4:

Prerequisite: 301.

Composition is continued. Reading of prose, poetry and scientific German of difficult character.

Text: German Composition, Harris; Gustav Freytag, Soll und Haben; Scheffel, Der Trompeter von Saekkingen; scientific magazines. Texts vary.

401 Schiller. Class 4 hours. Credit 4.

Prerequisite: 302 or 204.

Intensive study from the literary and cultural side of a number of carefully chosen dramas. Essays in German based on the texts. Collateral reading. Course is conducted in German.

Text: Jungfrau von Orleans and Maria Stuart, or Braunt von Messina and William Tell or Wallenstein.

402 Goethe. Class 4 hours. Credit 4.

Prerequisite: 401.

Lectures on Goethe's life and works; study of Goethe's prose, poetry and drama; essays written in German. Collateral reading. Course is conducted in German.

Text: Faust (Part I) and Egmont, or Iphigenie auf Tauris.

#### LATIN

103 Caesar. Class 4 hours. Credit 4.

Prerequisite: One year of Latin.

Three books of the Gallic War are read. Methods of translating are carefully taught until the student reaches the point where diligence alone will give mastery. Constant drill in forms, syntax and pronunciation.

Text: Any text in Caesar.

104 Caesar. Class 4 hours. Credit 4.

Prerequisite: 103.

Two more books of the Gallic War are read. Drill in sight reading. One hour a week is devoted to prose composition.

Text: Daniel's Composition.

201 Cicero's Letters and Orations. Class 4 hours. Credit 4.

Prerequisite: 104.

A reading course with special attention to the life and personality of Cicero.

202 Cicero's Essays. Class 4 hours. Credit 4.

Prerequisite: 201.

A study of the life, personality and philosophy of Cicero. Study of Cicero's style and prose composition.

Text: Cicero's De Senectute, De amicitia.

301 Virgil. Class 4 hours. Credit 4.

Prerequisite: 202.

The first three books of the Aeneid; lectures on the meter.

302 Roman Historians to Tacitus. Class 4 hours. Credit 4.

Prerequisite: 301.

A reading course of selections from Nepos, Sallust, Livy and Tacitus.

401 Horace's Odes and Epodes. Class 4 hours. Credit 4.

Prerequisite: 302.

Memorizing of at least six odes. Discussions of Roman lyric poetry.

402 Teachers' Course. Class 4 hours. Credit 4.

Prerequisite: 301.

Lectures on bibliography and on methods of teaching elementary Latin. Discussions of standard elementary texts.

#### FRENCH

201 Beginners' Course. Class 4 hours. Credit 4.

Essentials of French grammar; the more common irregular verbs. Reading of about one hundred pages of easy prose. Careful training in pronunciation.

Text: Nouveau Cours Français, Fontaine; Guerber's Contes et Legendes.

202 Beginners' Course. Class 4 hours. Credit 4.

Prerequisite: 201.

Continuation of course 201.

Text: Aldrich and Foster's French Reader.

301 Advanced Course. Class 4 hours. Credit 4.

Prerequisite: 202.

The grammar is finished. Drill on irregular verbs, reading of standard authors. One hour of composition.

Text: Merrimee's Colomba; French Prose Composition, Francois.

302 Advanced Course. Class 4 hours. Credit 4.

Prerequisite: 301.

Continuation of course 301. Two dramas and one prose work of fiction will be read.

Text: Victor Hugo's Les Miserables; Corneille, Le Cid; Mollieres L'Avare.

#### SPANISH

#### 201 Beginners' Course. Class 4 hours. Credit 4.

A practical and thorough course conforming to the most advanced methods of teaching; careful treatment of pronunciation; frequent oral drilling insures command of the language.

Text: Coester's A Practical Spanish Grammar; Harrison's Elementary Spanish Reader.

203 Beginners' Course. Class 3 hours. Credit 3.

Same course as 201 with the omission of the reader.

202 Beginners' Course. Class 4 hours. Credit 4.

Prerequisite: 201.

Continuation of course 201. Thorough mastery of the principles of verb inflection. Same text as 201; in addition easy plays will be read.

Text: Moratin's El Si de las Ninas.

204 Beginners' Course. Class 3 hours. Credit 3.
Same course as 202, with omission of the plays.

301 Advanced Course. Class 4 hours. Credit 4.

Prerequisite: 202.

Reading of 200 pages of prose selected from novels, plays and magazines with a view to the acquisition of a good reading vocabulary. Drills on the verb. Prose composition.

Text: El Pajaro Verde; Valera; Quien es Ella, Preton. Spanish Prose Composition, G. W. Humphrey.

303 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: 204.

Same course as 301, with the omission of prose composition.

302 Advanced Course. Class 4 hours. Credit 4.

Reading of 200 pages of prose designed to meet the requirements of commercial and engineering vocabularies.

Text: Dona Perfecta, Galdos, Guzmanel Bueno by Gilyzarte; Spanish Prose Composition, G. W. Humphrey; A Commercial Reader, Harrison.

304 Advanced Course. Class 3 hours. Credit 3.

Same course as 302, with the omission of prose composition,

#### DEPARTMENT OF DRAWING AND ART WORK

ADA HAHN, Professor C. M. Edson, Assistant

The aim of the courses in this department is to give training that is necessary for use in the practicum subjects of the College.

In the Freshman year the drawing is so planned as to afford the same work for all students in courses where drawing is taken, giving the elementary principles and their application in matters of everyday life.

In the School of Home Economics a study is made of the principles of space and color harmony with regard to their use in interior and exterior decoration of homes and costumes.

The object of the work is to develop an appreciation of good form and color, and to enable the student to exercise a more intelligent and sensitive discrimination in their use. Emphasis is laid upon well chosen and inexpensive decoration.

- 101 Freehand Drawing. Practice 2 hours. Credit 3/3.
- 102 Freehand Drawing. Practice 2 hours. Credit 3/3. Prerequisite: 101.
- 103 Freehand Drawing. Practice 4 hours. Credit 11/3.
- 201 Design and Color. Class 1 hour; practice 2 hours. Credit 1%. Prerequisite: 102.
- 202 Design and Color. Class 1 hour; practice 2 hours. Credit 13/3. Prerequisite: 201.
- 301 Water Color Drawing. Practice 4 hours. Credit 11/3. Prerequisite: 101.
- 303 Applied Arts and Woodcarving. Class 2 hours; practice 2 hours. Credit 2%.
  Prerequisite: 102.
- 304 Applied Arts and Woodcarving. Class 2 hours; practice 2 hours. Credit 2%.
  Prerequisite: 303.
- 305 China Painting.

  Elective to all students without credit,

#### DEPARTMENT OF HISTORY

S. A. MARONEY, Professor

The study of history has two distinct but not incompatible aims. One of these is personal culture, the other is practical vocational value. Each of these standards is sought in both method and matter in different proportions to suit the various courses of the Agricultural and Mechanical College. The amount of work offered is limited by the technological character of the curriculum. The newer conceptions of history prevail, which treat the subject more for thought than for memory of facts, minimize the wars, and stress ethical, political and industrial features. Special adaptations are made to reinforce the College work in agriculture and home economics. The College library contains many valuable sets and reference works which are being added to from time to time.

The department has charge of the history in the Secondary School. For courses in History 21, 22, 31, 32 and 34 see Secondary School.

The School of Science and Literature and the School of Education require one year of history—course 202—and one semester selected from the Senior-Junior group and taken during the Junior year.

## **SUBJECTS**

## 202 Advanced American History. Class 3 hours.

Prerequisite: History 31 and 32.

Covers the whole field of United States history. Work of College standard. Use of library prominent. Leads to insight into present-day events, problems, and ideals of the Nation.

## 202 Industrial History. Class 3 hours.

Special study of development of topics related to the home, such as textiles, dress, medicine, social customs, art, manufactures, travel and transportation. An adaptation to Home Economics.

## 301-302 History of England. Class 3 hours.

301 Prerequisite for 302.

Survey of rise of the English Nation, with particular attention to the growth of Anglo-Saxon forms of government, advancement in democracy, and Industrial Revolution as roots of modern institutions. Gives background of English language and literature.

## 304 Modern History of Europe. Class 3 hours.

College work on period from French Revolution to present. Purpose to lead to an understanding of European affairs and present-day problems.

#### 303 Industrial History of the United States. Class 2 hours.

Emphasizes the economic side of our national growth as an expression of American life, rather than the political development.

#### 402 Constitutional History of the United States.

Growth of various forms and units of government from colonial times. Operation and adaptation of the Constitution. Latest steps of democracy, rise of corporations, problems of civic justice and social welfare.

Text: American History and Government, West.

#### DEPARTMENT OF PHYSICS

W. P. ANGEL, Assistant

Physics is the basic science which includes the fundamental laws and principles involved in all physical changes. The courses which follow give both a theoretical and practical treatment of the subject. Instruction is based on the material contained in carefully selected textbooks. This is supplemented by lectures illustrated by demonstrations and by lantern slides. The purpose is to give a training in exact reasoning, and a knowledge of principles that will aid in the solution of both scientific problems and those encountered in everyday life.

The laboratory work gives the student an opportunity to test the principal laws of the science. Special attention has been given to equipping the laboratory with modern apparatus which will give consistent experimental results. This work is carefully coordinated with the work of the classroom, and should enable the student to acquire skill in the manipulation and care of delicate apparatus.

The lecture room is provided with terraced seats which permit the students to see the demonstrations performed on the lecture table. It is equipped with a combination lantern slide and opaque projectoscope which is used in illustrated lectures. The laboratory is well arranged for work, and the equipment provided is of such a nature that it meets the requirements of the different courses.

## **SUBJECTS**

101 Household Physics. Class 2 hours, laboratory 2 hours. Credit 2%.

A study of the principles involved in the appliances of the modern household.

201 Engineering Physics—Mechanics, Heat and Sound. Class 4 hours, laboratory 2 hours. Credit 4%.

Prerequisite: Math. 101, 102, 103.

A study of the principles involved in mechanics, heat and sound, with special reference to their relation to the engineer.

202 Engineering Physics—Light, Magnetism and Electricity. Class 4 hours, laboratory 2 hours. Credit 4%.

Prerequisite: Math. 101, 102, 103.

Light, magnetism and electricity are treated in a similar way to the subjects studied in 201.

203 General Physics—Mechanics, Heat and Sound. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: 101, 102, 103.

A study of the general principles involved in mechanics, heat and sound.

204 General Physics—Light, Magnetism and Electricity. Class 3 hours, laboratory 4 hours. Credit 4½.

Prerequisite: Math. 101, 102, 103.

A continuation of course 203, in which a study is made of the general principles of light, magnetism and electricity.

#### DEPARTMENT OF BOTANY

C. D. LEARN, Assistant

This department occupies rooms in Morrill Hall. During the past year this department has been working at some disadvantage owing to the fire of August 7, 1914, which utterly destroyed this department and over \$15,000.00 worth of equipment.

This material is being rapidly replaced with new and superior equipment in every respect.

The classrooms and laboratories of this department are large in size and well equipped with microscopes and all other paraphernalia necessary for student instruction.

## SUBJECTS

101 General Botany. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Bot. 22.

A study of the lower forms of plants from the standpoint of structure and relationship.

Text: Principles of Botany, Bergen and Davis.

102 General Botany. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Bot. 101.

A study of both the gross and microscopical structure of higher plants.

Text: Plant Anatomy, Stevens.

201 Plant Physiology. Class 3 hours, laboratory 2 hours. Credit 33/3. Prerequisite: Bot. 101, 102.

A study of the vital processes in higher plants.

Text: Vegetable Physiology, Green.

202 Genetics. Class 3 hours. Credit 3.

Prerequisite: Bot. 101, 102; Algebra.

An elementary drill in the principles of biometry.

Text: Genetics, Walters.

301 Pathology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Bot. 101, 102, 201.

A study of fungous diseases, both host and parasite.

Text: Fungous Diseases of Plants, Duggar.

302 Systematic Botany. Class 1 hour, laboratory 6 hours. Credit 3. A taxonomic study of flowering plants.

Text: Manual of Botany, Gray (seventh edition).

401 Special Systematic Botany. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Bot. 302. A continuation of 302.

Text: Manual of Botany, Gray (seventh edition).

402 Morphology of Higher Plants. Class 3 hours, laboratory 4 hours, Credit 41/3.

Prerequisite: All preceding botany. A histological study of higher plants.

403 Cytology. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: All preceding botany.

A study of the cell.

405 Morphology of Higher Plants. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: All preceding botany. A histological study of lower plants.

## THE SCHOOL OF EDUCATION

JOHN H. BOWERS, Dean

The literary, scientific and industrial work required of the students in the School of Education is done in those departments of the College having special facilities and equipment for teaching these branches efficiently and with greatest economy to the prospective teacher.

## B. S. Degree and State Life Certificate

Students who complete the full four years' course in the School of Education receive the Bachelor of Science degree and a State life certificate in Oklahoma, which certificate is also accepted in many other States.

#### Short Courses for Teachers' Certificates

Those who desire to prepare for teaching and do not wish to take the full four years' course can attend the College one or more terms and elect such studies as are necessary to secure a teacher's certificate. When a subject is completed at the College, that credit is accepted instead of examination on that subject for a teacher's certificate. All subjects required for a teacher's certificate are offered some time during the College year. A number of the subjects required for certificate are offered during each semester, but not quite all are offered during any one semester, except the Summer Term. During the Summer Term all teacher's certificate subjects are offered.

## Special Courses for Rural Teachers

The College offers excellent courses of study for those who are preparing to teach in the rural schools. The College instructors understand and appreciate the needs of country life and devote their best efforts to the problems of rural welfare.

## Requirements for Graduation

The candidate for graduation from the School of Education, in addition to the subjects required for a State permanent certi-

ficate, must select one of the major groups of studies or vocational studies—agriculture or home economics—in which at least twenty-seven hours' credit shall be earned. Other elective hours may be chosen from the major groups and from any other department of the College, subject to the approval of the head of the department and of the Dean of the School of Education.

The major groups of studies, from one of which the required twenty-seven hours must be chosen, are as follows:

Biological Sciences

History, Economics and Social Science

English

Foreign Languages

Physical Sciences

Agriculture

Home Economics.

Mathematics may be counted as a science. Chemistry is counted as a physical science.

#### COURSES IN THE SCHOOL OF EDUCATION

The following outline of study represents the required and elective work in the School of Education. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate a student must earn 36 credits per year, or a total of 144 credits, not including any credit given for military science or physical training. Students will not be allowed to register in less than fifteen nor more than twenty credit hours, except by special permission. Sophomore electives are open to Juniors and Seniors where the necessary prerequisite work is taken.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work,

#### FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMES	TER	
H	Iours.	Credit.		Hours.	Credit.
Eng. 101, Elements of Composition		4	Eng. 102, Elements of Composition	4	4
Chemistry 3	(4)	4 1-3	Chemistry		4 1-3
Bot. 101, General Botany 2 Draw. 101, Freehand	(4)	3 1-3	Bot. 102, General Botany Draw. 102, Freehand	2 (4)	3 1-3
Drawing Eng. 121. Essentials of	(2)	2-3	Drawing Eng. 122, Essentials of	(2)	2-3
Public Speaking	(2)	2-3	Public Speaking Vocational Subjects	(2)	2-3
Eng. 103, Library Reference	(1)	1-3	or Foreign Languages		
Foreign Languages			Math. 106 (approx) Military (for men)		.5
Math. 105, approx 5 Military (for men) Physical Education	(3) (3)	5	Physical Education 102 Music (optional)	(3)	1 2-3
Music (optional) 1	(2)	1 2-3			

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours.	${\bf Credit}.$
Eng. 201, Exposition 2 2001. 201, General Zool- ogy 3 201, General Zool- ogy 3 203, General 2 204, Physics 3 205, General 3 206, General 3 207, General 4 208, General 5 208, General 6 208, General 7 208, General 7 208, General 7 209, General 7 20	2 4 1-3 4 1-3 8	Eng. 202, Narration and Description 2  Hist. 202, Advanced  American 3  Electives (approx)	·2 3 13

SECOND SEMESTER

#### Suggested Electives for Sophomores

FIRST SEMESTER

TIROT OLIMBOTER		ODCOND ODINE		
Hours. (	Credit.		Hours.	Credit.
Eng. 205, Current		Eng. 206, Current		_
Literature 1	1	Literature 1		1
Eng. 207, Survey of		Eng. 208, Survey of		
English Literature 4	4	English Literature 4		4
History 3	3	Zool. 204, Field 3	(4)	4 1-3
Econ. 201, Elements of		Physics		4 1-3
Economics 3	3	Eng. 222, Debating	(2)	2-3
Eng. 221, Practical	0.0	CT TO THE		
Public Speaking (2)	2-3	Eng. 224, Vocal Ex-	(0)	0.2
or .		pression	(2)	2-3
Eng. 223, Vocal	0.2	Math. 204		3
Expression(2)	2-3	Foreign Languages 4		4
Math. 203, Theory of	3	Chem. 204, Quantitative	(2)	1 2-3
Foreign Languages 4	1	Analysis	(2)	1 2-3
Chem. 203, Quantitative	7	Analysis 1	(4)	2 1-3
Analysis 1 (4)	2 1-3	Math. 204, Astronomy 3	(7)	3
Chem. 201, Qualitative	I O	Music (optional) 1	(2)	1 2-3
Analysis 1 (2)	1 2-3	vicable (optional)	(-)	
Music (optional) 1, (2)	1 2-3			
(-)				
	JUNIOR	YEAR		
	JUNIOR	YEAR		
	JUNIOR	YEAR SECOND SEMESTE	DR.	
J FIRST SEMESTER		SECOND SEMESTE		Credit.
FIRST SEMESTER Hours. (		SECOND SEMESTE		Credit.
FIRST SEMESTER Hours. (		SECOND SEMESTE		Credit.
FIRST SEMESTER Hours. ( Educ. 301, Elementary Psychology	Credit.	SECOND SEMESTE  Educ. 302, Applied		
FIRST SEMESTER  Hours. ( Educ. 301, Elementary Psychology	Credit. 3 2	Educ. 302, Applied Psychology		3 2
FIRST SEMESTER  Hours. ( Educ. 301, Elementary Psychology	Credit.	SECOND SEMESTE Educ. 302, Applied Psychology		3
FIRST SEMESTER  Hours. ( Educ. 301, Elementary Psychology 3 Educ. 303, High School Teaching 2 Electives 13	2 13	Educ. 302, Applied Psychology 3 Educ. 304, Theory & Practice 2 Electives 13		3 2
FIRST SEMESTER  Hours. ( Educ. 301, Elementary Psychology 3 Educ. 303, High School Teaching 2 Electives 13	Credit. 3 2	Educ. 302, Applied Psychology 3 Educ. 304, Theory & Practice 2 Electives 13		3 2
FIRST SEMESTER  Hours. ( Educ. 301, Elementary Psychology	2 13	Educ. 302, Applied Psychology	Hours.	3 2
FIRST SEMESTER  Educ. 301, Elementary Psychology	Credit.  3  2 13  SENIOR	Educ. 302, Applied Psychology	Hours.	3 2 13
FIRST SEMESTER  Educ. 301, Elementary Psychology	2 13	Educ. 302, Applied Psychology 3 Educ. 304, Theory & Practice 2 Electives 13 YEAR  SECOND SEMESTE	Hours.	3 2
FIRST SEMESTER  Educ. 301, Elementary Psychology	Credit.  3 2 13 SENIOR Credit.	Educ. 302, Applied Psychology	Hours.	3 2 13
FIRST SEMESTER  Educ. 301, Elementary Psychology 3 Educ. 303, High School Teaching 2 Electives	Credit.  3 2 13 SENIOR Credit. 2	Educ. 302, Applied Psychology	Hours.	3 2 13 Credit.
FIRST SEMESTER  Educ. 301, Elementary Psychology	Credit.  3 2 13 SENIOR Credit.	Educ. 302, Applied Psychology	Hours.	3 2 13 Credit.
FIRST SEMESTER  Educ. 301, Elementary Psychology 3 Educ. 303, High School Teaching 2 Electives	Credit. 3 2 13 SENIOR Credit. 2 2	SECOND SEMESTE  Educ. 302, Applied Psychology	Hours.	3 2 13 Credit.
FIRST SEMESTER  Educ. 301, Elementary Psychology	Credit.  3 2 13 SENIOR Credit. 2	Educ. 302, Applied Psychology	Hours.	3 2 13 Credit.

#### Elective Subjects

Twenty to twenty-five percent of the work is to be elected from one of the six groups of electives given below, the remainder of the work to be taken from the group of free electives or from any other electives offered in the Junior and Senior years.

#### JUNIOR AND SENIOR ELECTIVES

#### Group I-Biological Sciences

FIRST SEMESTER			SECOND SEMES	TER	
		Credit.		Hours.	
Bact. 301, General 3 (	(4)	4 1-3	Bact. 302, Soil Bact. 304, Dairy	2 (4)	3 1-3
Bact. 401, Sanitary			Bact. 304, Dairy	2 (4)	3 1-3
Biology 2 (	(4)	3 1-3	Bact. 402, Sanitary		
Bact. 401, Sanitary Biology	(4)	3 1-3	Science	.3	3
Bot. 201, Plant			Bact. 404, Immunity	3 (4)	4 1-3
Physiology 2 (	(4)	3 1-3	Bot. 202, Genetics	2 (4)	3 1-3
Bot. 301. Plant			Bot. 302, Systematic		3
Pathology 2 (	(4)	3 1-3	Hort. 402, Landscape Gardening		
Hort. 303, Forestry (	(3)	1	Gardening	3 (2)	3 2-3
Zool. 301, Histology 2 (	(4)	3 1-3	Zool. 302, Comparative		
Zool. 401, General			Anatomy	2 (4)	3 1-3
Biology 2 (	(4)	3 1-3	Zool. 402, Embryology	2 (4)	3 1-3
Phys. 201, Advanced 3 (	(2)	3 2-3	Entom. 302, General	3 (2)	3 2-3
Entom. 401, Agricultural			Entom. 304, Household	1 (2)	1 2-3
and Horticultural 3 (	(2)	3 2-3	Entom. 402, Apiculture	2 (2)	2 2-3
			Thesis	1 (6)	

#### Group II-History, Economics and Social Science

FIRST SEMESTER
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#### SECOND SEMESTER

	Hours.	Credit.		Hours.	Credit.
Econ. 201, Elements of	3	3	Econ. 302, Labor		2
Econ. 301, Business			Econ. 304, Rural	2	2
Organization	2	2	Hist. 304, Modern		
Hist. 301, English	3	3	Europe	3	3
Hist, 303, United States			Hist, 302, English		3
Industrial	2	2	Hist. 402, United States		
			Constitution	3	3
			Educ. 306. Rural	_	_
			Education	1	1

#### Group III-English Language

#### FIRST SEMESTER

#### SECOND SEMESTER

	Hours.	Credit.		Hours.	Credit.
*Eng. 303, American Literature	3	3	Eng. 302, Feature and Publicity Writing	2	2
Eng. 301, Editorial, Publicity Work* *Eng. 305, English	2	2	*Eng. 304, American Literature *Eng. 306, English	3	3
Language Eng. 321, Forms of	2	2	Language Eng. 402, Vic. Poets,	2	2
Public Address Eng. 401, Vic. Essayists, Carlyle and Ruskin	(2)	2-3 3	Tennyson and Browning	3	3
Eng. 403, Romantic		3	Eng. 404, Shakespeare and the Drama* *Eng. 406, The Novel		3 2
*Eng. 405, The Novel	2	2			

\*Only one of these courses offered each year. Courses 303, 304 will be offered in 1915-16.

#### Group IV-Foreign Languages

#### FIRST SEMESTER

#### SECOND SEMESTER

		Credit.		Hours. Credit.
Ger. 301. Masterpieces	4	4	Ger. 302, Masterpieces 4	4
Ger. 401. Schiller	4	4	Ger. 402. Schiller 4	4
Lat. 301, Virgil		4	Lat. 302. Tacitus 4	4
Lat. 401, Horace		4	Lat. 402, Teachers'	
Fr. 201, Beginners'		4	Course 4	4
Fr. 301, Advanced		4	Fr. 202, Beginners' 4	4
Sp. 201, Beginners'		4	Fr. 302, Advanced 4	4
Sp. 301, Advanced		4	Sp. 202, Beginners' 4	4
<i>Dp.</i> 001, 114, 4110	·	·	Sp. 302, Advanced 4	4

#### Group V-Physical Sciences

#### FIRST SEMESTER

#### SECOND SEMESTER

	Hours.	Credit.		Hours.	Credit.
Chem. 301, Determinative Mineralogy and			Chem. 302, Assaying and Valuation (a continua-		
Blowpipe Analysis Chem. 303. General	1 (4)	2 1-3	tion and application of Determinative Min. &		
Quantitative Analysis Chem. 305, Organic	1 (4)	2 1-3	Blowpipe Analysis) Chem. 304, General	1 (4)	2 1-3
Analytical	1 (4)	2 1-3 4 1-3	Quantitative Analysis Chem. 306, Organic	1 (4)	2 1-3
Chem. 313, Physiologic Chem. 317, Seminar	1 (4)	2 1-3	Analysis	1 (4)	2 1-3
Chem. 401, Advanced Inorganic		3 1-3	ral Analysis	1 (4)	2 1-3
Chem. 403. Advanced	2 (4)	3 1-3	Analysis		2 1-3
Ouantitative	1 (4)	2 1-3	Chem. 314, Physiologic		21-3
			Chem. 314, Organic Chem. 318, Seminar		21-3
			Chem. 402, Physical Chem. 404, Advanced	2 (4)	3 1-3
			Quantitative Analysis	1 (4)	21-3
			Thesis	1 (8)	3 2-3

#### Group VI-Mathematics

FIRST SEMESTER	SECOND SEMESTER
Math. 201, Calculus 4 4 Math. 205, Spherical	Math. 202, Calculus 4 Math. 302, Differential
Trigonometry 1 1 Math. 301, Differential	Equations 3
Equations 3	
Math. 303, Least Square, 1 1 Math. 401, Analytical	
Geometry of Three	•

Electives in Agriculture, Agronomy, Dairying, Horticulture, Entomology, Animal Husbandry, will be found by referring to the courses of study in the School of Agriculture. Students in the School of Education may elect any subjects in the School of Agriculture for which they have the prerequisite.

Electives in Home Economics, Domestic Science and Domestic Art will be found in the School of Home Economics. Students in the School of Education may elect any subjects in Home Economics for which they have the prerequisite.

A grade in Agriculture is required for a State life certificate, and to meet this requirement men will be expected to take at least two semesters' work in Agriculture, and they are advised, if possible, to begin the election of Agriculture in the Freshman year.

A grade in Domestic Science is required for a State life certificate, and women will be expected to take at least two semesters' work in Home Economics, which work they are advised to begin electing in the Freshman year, or as early as possible.

Unclassified electives include Plays and Games, first semester one hour; Theory of Physical Education one hour second semester.

#### DEPARTMENT OF EDUCATION AND SOCIAL SCIENCE

JOHN H. BOWERS, Professor

#### **SUBJECTS**

#### EDUCATION

## 301 Psychology. Class 3 hours. Credit 3.

The primary purpose of this course is to teach the conditions, processes and laws of mental development; and to understand the motives and forces that give rise to human conduct. Students will prepare for and verify the class discussions by reading from standard textbooks. Teachers who complete this course will be credited on teachers' certificates.

## 302 Applied Psychology. Class 3 hours. Credit 3.

This course deals with the application of the laws and methods of psychology to the problems of life and the work of teaching. Classroom lectures will be supplemented by assigned readings. Students will offer independent discussions before the class.

## 303 High School Teaching. Class 2 hours. Credit 2.

This course is devoted to the best methods of teaching high school subjects. General lectures will be supplemented by assigning to each individual student reading along the lines of his interests and his specialization. Some of the books used are: Smith's Teaching of Mathematics, Lloyd and Bigelow's Teaching of Biology, Smith and Halls' Teaching of Physics and Chemistry; Bourne's Teaching of History and Civics; Carpenter, Baker and Scott's Teaching of English; Young's Teaching of Mathematics.

## 304 Theory and Practice of Teaching. Class 2 hours. Credit 2.

The theoretical part of this course deals with such topics as: The teacher before the class; conducting the recitation; training pupils to study and to think; teaching pupils the art of securing, retaining and expressing useful knowledge, and the various means of developing the several school subjects.

## 401 History of Education. Class 2 hours. Credit 2.

The purpose of this course is to arrive at correct notions of what ought to be done in the light of what has been done, the diversity of educational ideals in different countries, and the best methods for future advancement. The further aim is to create a deep interest in the lives and works of great educators as a source of inspiration and guidance.

## 402 Philosophy of Education. Class 2 hours. Credit 2.

This course deals with such problems as the philosophy of the learning process; educational psychology; the nature of education, its possibilities and its limitations; physical education; religious education; intellectual development; vocational education; social education; moral education; educational aims and values; education for discipline, for culture and for efficiency.

#### 403 High School Administration. Class 1 hour. Credit 1.

This course will deal with the curriculum, the organization and the management of the high school.

## 404 School Supervision. Class 1 hour. Credit 1.

The work in this course is devoted to the practical problems of public school organization and administration. Some of the topics are: The course of study, teachers' meetings, securing harmony and cooperation of directors, principals, teachers and students, school buildings, equipment, and general educational interests. Whenever there is a call for work in rural school supervision, such work will be offered.

## 405 Ethics. Class 2 hours. Credit 2.

The fundamental principles of the moral life are studied; along with the moral ideals and methods of the individual, the family, the state and other social institutions. The aim is to understand such moral principles as will promote both individual and social welfare.

## 406 Logic. Class 2 hours. Credit 2.

A study is made of the laws of thinking and the processes of true reasoning. Common errors in thinking with the causes for such errors are pointed out, and guiding principles for correct thinking processes are studied.

#### 306 Rural Education. Class 1 hour. Credit 1.

This course deals with rural schools, their organization, their administration and the various means proposed for their improvement.

#### SOCIAL SCIENCE

## 301 Principles of Sociology. Class 2 hours. Credit 2.

With a preliminary survey of the conditions of social life and the principles of social psychology and social organization, the course traces the development of the great human institutions of the family,

the economic classes, the state, the church, the school and the higher life; and concludes with special attention to the factors involved in social progress, morality and social welfare.

#### 302 The Duties of American Citizenship. Class 2 hours. Credit 2.

With a preliminary survey of important social conditions in the United States, the course takes up the most practical methods of social betterment in respect to the family, neglected children, the workingman, rural communities, public health, the great cities, the church, the great corporations and the Government.

#### 303 Social Welfare. Class 1 hour. Credit 1.

This course deals with the causes and remedies for some of the larger social evils and studies the relation which the liquor traffic bears to social welfare.

#### 404 Political Methods. Class 1 hour. Credit 1.

This course makes a practical and impartial study of the facts concerning the methods by which the different political parties organize and conduct their compaigns. Nothing prejudicial is expressed concerning any party. The object is to teach the actual methods of self-government.

#### 401 Government-Local. Class 2 hours. Credit 2.

A study of local government, both rural and urban conditions, and possibilities of improvement.

#### 402 Government-Federal. Class 2 hours. Credit 2.

A brief preliminary survey of the forms through which governments have evolved; a discussion of the principles of democracy, of the forms and actual practices of our American National and State Governments, their constitutional development and their problems.

## THE SCHOOL OF COMMERCE AND MARKETING

H. W. Moorhouse, Dean

The School of Commerce and Marketing offers two courses. A description of the two-year course in Business Training is found under the Department of Business Training.

## The Four-Year Course

The four-year course in Commerce and Marketing is open to students presenting fifteen-unit credits for entrance and leads to a B. S. degree. For advanced standing, application should be made to the Dean of the School.

This course has been planned to give students an understanding of business and business relationships. Commerce, industry and trade have become so complex that men engaged in such activities must have a thorough knowledge of business methods and economic principles. Commerce, which was once limited to small, restricted areas, now, with modern transportation and communication, covers the entire earth. Marketing, at one time a single transaction, is now an intricate process, weaving its way through a maze of varied industry and business. Since the great majority of students enter some branch of industry, it is important that opportunity should be given in a course of this kind to gain a grasp of fundamental business principles.

The largest single group of subjects is taught by the Department of Economics and Marketing. These subjects give young men breadth of view in business affairs and train them in the execution of details for the purpose of preparing them for active management in the world of industry. The description of these courses on another page shows the scope and strength of the work.

The second largest group of subjects is given by the Department of Business Training. Shorthand and typewriting are re-

quired the first year so that the student can use them through the balance of the course. Bookkeeping, accounting and office administration are offered in the later years.

A strong selection of agricultural subjects is included because agriculture is our foundation industry and is the source of a large share of commercial and economic problems. Writing and public speaking, which are so essential in every field of activity, are emphasized. Spanish and German languages are offered. Trade is now international. Corporations are multiplying their foreign representatives, and the Government is extending its consular service. By use of the electives in the Junior and Senior years the student can point his study in the direction of his special interests.

It is believed that this course gives an essential grasp of business knowledge and that the graduate who has initiative and is willing to work will always make a big place for himself in his chosen field of affairs.

# COURSES IN THE SCHOOL OF COMMERCE AND MARKETING

The following outline of study represents the required and elective work in the School of Commerce and Marketing. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate a student must earn 36 credits per year, or a total of 144 credits, not including any credit given for military science or physical training. Students will not be allowed to register in less than fifteen nor more than twenty credit hours, except by special permission. Sophomore electives are open to Juniors and Seniors where

the necessary prerequisite work is taken.

FIRST SEMESTER

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

FRESHMAN	YEA	١R
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SECOND SEMESTER

Hours, Credit.	Hours, Credit.
Econ. 101, Elements of	Econ. 102, Elements of
Business 2 2	Business 2 2
Eng. 101, Elements of Composition 4	Eng. 102, Elements of Composition 4
Chem. 101. General: 3 (4) 4 1-3	Chem. 102, General 3 (4) 4 1-3
Bus. 101, Shorthand 4	Bus. 102, Shorthand 4
Rus 103 Typewriting (10) 3 1-3	Bus. 104, Typewriting (10) 3 1 3 Eng. 122, Essentials of
Eng. 121, Essentials of Public Speaking (2) 2-3	Public Speaking (2) 2-3
Public Speaking (2) 2-3 Eng. 103, Library	Public Speaking (2) 2-3 Physical Education (3)
Reference(1) 1-3	Military Science (3)
Physical Education (3)	
Military Science(3)	
SOPHOMO	RE YEAR
FIRST SEMESTER	SECOND SEMESTER
Hours. Credit.	Hours. Credit.
Econ. 201. Elements of	Econ. 202, Elements of
Economics	Eng 204 Magazine
Agron. 201, Cereals and	Writing 2 2
Grain Judging 2 (4) 31-3	Agron, 202, Forage and
Edu. 301, Psychology 3	Fiber Crops
For. Lang. Sp. 201,	Zool. 202, Economic 2 (4) 3 1-3 For. Lang.
0f	Sp. 202,
Ger. 201 4 4	or
Soc. Sci. 301, Sociology 2	Ger. 202 4
Eng. 205, Current Magazines 1	A. H. 102, Market Types and Breeds 2 (4) 31-3
Military Science	Military Science (3)
JUNIOR	
FIRST SEMESTER	SECOND SEMESTER
Hours, Credit.	Hours, Credit.
Econ. 301. Business	Econ. 302. Labor
Organization 2 2	Economics 3
Econ. 303, Banking 3	Econ. 304, Rural
Bus. 301, Bookkeeping 1 (10) 4 1-3	Economics
For. Lang. Sp. 301,	and Auditing 3 (2) 3 2-3
( *	Foreign Language
Ger. 203 4 4	Sp. 302,
Eng. 221. Practical Pub-	Or 204 4
lic Speaking (2) 2-3	Ger. 204
At gift	Tring, and Trendering

#### SENIOR YEAR

FIRST SEMES	TER		SECOND SEMESTER	
D 404 M	Hours.	Credit.		. Credit.
Econ. 401, Transporta-	3	3	Econ. 402, Insurance and Investments	2
Econ. 403, Rural	2	2	Econ. 404, Domestic and Foreign Markets 2	2
Organization Econ. 405, Salesmanship,	2	2	Econ. 406, Contracts and	
			Laws of Business 2 Bus, 402, Office	2
			Administration 1 (2)	1 2-3

#### JUNIOR AND SENIOR ELECTIVES

FIRST SEMEST	ER		SECOND SEMES	TER	
	Hours.	Credit.		Hou	rs. Credit.
For. Lang.			For. Lang.		
Sp. 201-301,			Sp. 202-302,		
or			or		
Ger. 301	4	4	Ger. 302	4	4
Eng. 301, Editorial and	2	2	Eng. 302, Feature and	2	2
Publicity Writing, Educ. 303, High School	4	4	Publicity Writing Edu. 404, High School	4	4
Teaching	2	2	Supervision	2	2
Hist., 19th Century	_	-	Soc. Sci. 402, Govern-	<b>₩</b>	2
History	3	3	ment	3	3
Eng. 321, Forms of			Hist. 304, Modern His		
Public Address	(2)	2-3	tory of Europe	3	3
A. H. 403, Animal			A. H. 402, Stock Farm		
Production	3	3	Management	2 (2	2 2-3
Hort. 401, Packages and	_	0	Agron, 402, Farm	0 (0	
Packing	2	2	Management	2 (2	2 2-3
Econ. 407, Cost Accounting	(4)	1 1-3	Production	3	3
Econ, 409, Banking	(+)	1 1-5	Econ. 408, Traffic Rates	3	3
Management	(4)	1 1-3	and Management	2	2
Econ. 411, Business	( - /		Econ. 410. Marketing		_
Administration	2	2	Investigation	2	2
Agron. 403, Cotton Pro-					
duction and Grading	2 (2)	2 2-3			

# DEPARTMENT OF ECONOMICS AND MARKETING

H. W. Moorhouse, Professor

Assistant Professor
A. C. Doering, Instructor

## **SUBJECTS**

#### 101 Elements of Business. Class 2 hours. Credit 2.

The purpose of this course is two-fold: First, to give a working knowledge of business forms, instruments and methods; and, second, to set forth a broad view of the elemental principles of business.

## 102 Elements of Business. Class 2 hours. Credit 2.

A continuation of Economics 101.

#### 201 Elements of Economics. Class 3 hours. Credit 3.

Introduction to the study of business, industrial and social problems, showing interrelation of all commercial activities.

Prerequisite for all economic subjects except Economics 101 and 102

#### 202 Elements of Marketing. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A groundwork in the geography of commerce and the uses of raw materials. These materials are traced through various stages to

the finished product. Each industry through which they pass is analyzed from the standpoint of efficiency. A view is given of the definite problems to be met and overcome.

## 301 Business Organization. Class 2 hours. Credit 2.

Prerequisite: Econ. 201.

Business is carried on mainly by corporations. The process of their organization, financing and management is shown. The modern "trust" is the subject of special study. Emphasis is placed upon the essentials of business administration. A view is given of the work of mercantile and manufacturers' associations, chambers of commerce, etc.

#### 302 Labor Economics. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A study of labor conditions from the standpoint of manager and laborer. A view is given of methods of scientific management and the best treatment of large and small bodies of workmen for the purpose of obtaining the best results in profits and human welfare. Some time is given to the tracing of industry from its beginnings to its present highly specialized processes, and special observations are made of industrial centers and causes contributing to their growth.

## 303 Banking. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

The relation of money and credit to every business activity is shown, and studies are made of the currency systems of the United States and foreign countries. The National and State laws now operative, as applied to commercial and rural banking, are analyzed. Some inquiries are made into questions of public finance. The various kinds of taxation are investigated.

## 304 Rural Economics. Class 2 hours. Credit 2.

Prerequisite or concurrent: Econ. 201.

A study of farm business and rural life. A view of the relation of the farm home, social life, good roads, community cooperation, tenancy, soil conservation, standardization of crops, rural credits and better marketing to rural progress. A broad view of the possibilities of reorganizing agriculture and rural life. A thorough survey is made of rural conditions in foreign countries, United States and Oklahoma.

## 306 Accounting and Auditing. Class 3 hours; practice 2 hours.

Prerequisite: Bus. 301.

Foundation work in the study of accounting and auditing. Both practice and theory are given. Financial statements, which include profit and loss accounts, cash receipts and disbursements, general and detailed balance sheets, are prepared and analyzed.

#### 308 Business for Women. Class 2 hours. Credit 2.

An explanation of the common instruments of business and of important economic principles. An examination of marketing problems with special reference to products bought for the home. A comparison of wholesale and retail, direct and indirect, cash and credit buying. Also a description of practical plans for household accounting.

## 401 Transportation, Class 3 hours, Credit 3.

Prerequisite: Econ. 201.

This course deals primarily with railroad economics, but some attention is given to water and highway transportation. The subject includes a history of railroad development in the United States, showing present problems and the relation of transportation to commerce. Railroad administration in foreign countries is investigated and study is made of governmental ownership.

#### 402 Insurance and Investments. Class 2 hours. Credit 2.

Prerequisite: Econ. 201.

A study of life and property insurance and various kinds of insurance organization. A view of the financial growth of insurance companies, showing their relation to the development of the country and their present financial influence. An investigation of bonds, stocks, mortgages, and all standard investments. Offered alternate years. Not given 1915-16.

#### 403 Rural Organizations. Class 2 hours. Credit 2.

Prerequisite: Econ. 201.

A survey of the establishment and history of farmers' organizations, particularly in the United States and Oklahoma, noting their present strength and influence and reasons for various failures. Particular study is given to the legal formation of cooperative corporations. Offered alternate years. Not given in 1915-16.

## 404 Domestic and Foreign Markets. Class 2 hours. Credit 2.

Prerequisite: Econ. 201 and 202.

Special study is given to retailing, wholesaling, commission dealing, direct selling, mail order houses, and the use of the parcel post, the activities of consumers' associations, etc. A survey is made of the important money, cotton, grain, livestock and other markets in this and other countries. United States consular reports and statistical information bearing on exports and imports of various countries are analyzed. Inquiries are made into opportunities for international trade development.

## 405 Salesmanship. Class 2 hours. Credit 2.

Prerequisite: Econ. 201 and 202.

A survey of the principles of salesmanship. Selling talks, sales letters and advertising copy are analyzed and practice in their preparation and application is given. Lessons are drawn from sales departments of large corporations. Goods, prices and market conditions are studied.

## 406 Contracts and Laws of Business. Class 2 hours. Credit 2.

Contracts are emphasized because no business transaction is possible without either a verbal or written contract. The methods of making, enforcing and terminating contracts, the statute of frauds, actions for damages, etc., are examined. Also a study of personal property, fixtures, agency, negotiable instruments, bailments, insurance, corporations, partnerships, etc.

## 407 Cost Accounting. Class 4 hours. Credit 11/3.

Prerequisite: Bus. 301, Econ. 306.

The cost system is applied to various lines of production and illustrated by practical problems. Factory costs are examined. Raw materials are traced through to the finished products and all costs noted. Labor and overhead expenses are analyzed.

## 408 Traffic Rates and Management. Class 2 hours. Credit 2.

Prerequisite: Econ. 201, 401.

Traffic problems of railroads, particularly, are examined carefully. A close comparison is made of land and water rates between certain points, and of freight and express shipments. Questions of routing and adjustment of claims, etc., are reviewed. The reports of State railroad commissions and the Interstate Commerce Commission are analyzed.

## 409 Banking Management. Practice 4 hours. Credit 11/3.

Prerequisite: Econ. 201, 303, 306.

Actual practice in directing the work of a bank. The duties and responsibilities of president, cashier, teller and clerks are assumed in turn. Loans must be passed upon and questions of policy decided.

## 410 Marketing Investigations. Class 2 hours. Credit 2.

Prerequisite: Econ. 201, 202, 404.

One investigation may be determined upon by each student. This must be worked out in minute detail. These investigations cover practical ground and require intelligent initiative for research.

#### 411 Business Administration. Class 2 hours. Credit 2.

Prerequisite: Econ. 101, 102, 201, 301, 303.

Actual practice in planning and executing business enterprises. Boards of directors' meetings are held, committee work assigned, etc. The grasp of each student of the enterprise as a whole and his ability to master details are thoroughly tested.

#### DEPARTMENT OF BUSINESS TRAINING

S. C. Bedinger, Professor A. C. Doering, Instructor H. T. Hill, Instructor

#### TWO-YEAR COURSE

The two-year course in business training is open to students who have completed the eighth grade or can pass a satisfactory entrance examination in common school subjects. Applicants must be at least 18 years of age. Application for advanced standing should be made to the head of the department.

At the completion of the work, the student is given a certificate showing that he has completed the prescribed course in business training.

## Outline of Courses in the Department of Business Training, Giving Subjects and Hours

#### FIRST YEAR

FIRST SEMESTER		SECOND SEMESTER
Bus. 1, Arithmetic	3	Bus. 2, Arithmetic
Bus. 3, Bookkeeping	(10)	Bus. 4, Bookkeeping (10)
Business English	4	Business English 4
Bus 5, Spelling & Penmanship	(4)	Bus. 6, Spelling & Penmanship (2)
Bus. 7. Shorthand	4	Bus. 8, Shorthand4
Bus. 9, Typewriting		Bus. 10, Typewriting(10)

#### SECOND YEAR

FIRST SEMESTER	•	SECOND SEMESTER
Bus. 51, Correspondence		Bus. 52, Office Training
Bus. 53, Spelling & Penmanship Bus. 55, Typewriting	(4) (8) (2)	Bus. 60, Dictation
Eng. 121, Public Speaking	(2)	Eng. 122, Public Speaking(2)

## **SUBJECTS**

## 1-2 Arithmetic. Class 3 hours. Credit 3.

The nonessentials are entirely omitted in this work. Those parts are given which contribute to business efficiency such as: Aliquot parts, fractions, interest and discount, storage, percentage, profit and loss, partnership settlements, equation of accounts and partial payments.

#### 3-4 Bookkeeping. Class 10 hours. Credit 31/3.

This course covers the different and various lines of industries. First, elementary work is given in the fundamental principles of debit and credit, followed by work in columnar books and statements of various kinds. There is special work in the closing of ledgers, the making of special business, trading, profit and loss and financial statements. In the more advanced work is included: Partnership and corporation accounting, special cost accounting, and work in the following particular lines: Banking, real estate, insurance, railroad station work, manufacturers', and jobbing and commission accounting. The thorough work in the above lines is supplemented with an auditing department where the functions of this subject are taught and its relation to the other departments shown.

## 301 Bookkeeping. Class 1 hour, book work 10 hours. Credit 41/3.

The principles in this course are the same as in Business 3 and 4, but presented in condensed form.

## 5-6-53-54 Spelling.

All persons taking the Business Course must carry this subject. Thousands of positions are each year either not secured or lost on account of bad spelling. The value of spelling to the stenographer especially is obvious. The same is almost equally true with the book-keeper. The work in spelling is always written. Students are required to make a grade of 95% on examination in the subject before securing a diploma.

## Penmanship.

The business world demands that penmanship should be plain, rapid, easily written and easily read. Slow writing is out of date. The student is taught the arm or muscular movement method. At first considerable time is spent on movement drills in order to develop a good foundation; this is followed by intermediate drills, and finally the letters, according to principles and frequency of occurrence. A great deal of time is spent on sentence practice and letter writing. The development of a small, rapid, condensed handwriting is the end in view.

#### 7-8-57-58 Shorthand. Class 4 hours. Credit 4 each.

This course covers thoroughly the Shorthand Manual and gives the student a thorough knowledge of the principles of the shorthand system, work signs, contraction and phrases, etc. This is followed by a large amount of dictation. The Gregg System is taught.

- 101-102 Shorthand. Class 4 hours. Credit 4 each. Similar to Bus. 7 and 8.
- 9 Typewriting. Machine work 8 hours. Credit 23/3.
- 10 Typewriting. Machine work 10 hours. Credit 31/3. Prerequisite: Bus. 9.

The touch system is employed. Mastery of the keyboard and a general knowledge of the mechanism of all standard machines. Requirements: First ten lessons in rational typewriting, or the equivalent, and a speed of twenty words per minute from copy matter. Speed drills and instruction in the care and adjustment of the typewriter. For stenographers, drills in transcription from shorthand notes and construction of letters. Nine hours per week. Requirements: Completion of all lessons in the manual up to Lesson 26, and a speed of thirty words per minute. Copy matter.

- 55 Typewriting. Machine work 8 hours. Credit 2%. Prerequisite: Bus, 9 and 10.
- 56 Typewriting. Machine work 10 hours. Credit 31/3. Prerequisite: Bus. 9-10-55.

Completion of the lessons in the manual. Drills in speed writing from manuscripts and rapid transcription from shorthand notes, including business letters and miscellaneous matter. Requirements: A speed of forty words per minute from copy matter; from shorthand notes, new matter, transcribed at the rate of twenty words per minute. Rapid transcription from shorthand notes. Dictation direct to the machine. Legal forms, stencil cutting and care of the machine. Requirements: A speed of fifty words per minute from copy matter, with not over five errors; from shorthand notes, transcribed at the rate of thirty-five words per minute, from new matter. All papers to be graded by the International Typewriting Rules.

- 103, 104 Typewriting. Machine work 10 hours. Credit 31/3 each.
- 51 Business Correspondence. Class 4 hours. Credit 4.

A practical knowledge regarding the art of selling by mail is given in this subject. Selling personal services, selling merchandise, or anything else where the art of selling is involved, is carefully taught; in other words, successfully doing business by letter.

## 52 Office Training. Class 4 hours. Credit 4.

This course is to meet the great needs of the stenographer who goes to work in an office. After completing the shorthand manual and taking up dictation the student is then ready for this course. It is intended to put the finishing touches to the student's knowledge of shorthand and typewriting. Thorough instruction is given in business ethics, the mechanics of letterwriting, uses of business forms and papers, filing, bills, shipping, duplicating, constructing business letters, rough draft, and, in fact, any other work likely to come under the student's supervision in an office.

## 59 Business Law. Class 3 hours. Credit 3.

This subject takes up contracts, negotiable paper, partnership, sale of chattels, interest, usury, wills, conveyances of real estate, mortgages, etc.

#### 61 Commercial Geography. Class 3 hours. Credit 3.

This comprises the study of the location of the sections that produce the different cereals, ores, fruits, vegetables, and, in fact, all commodities that are produced or handled in this country, and the relation they sustain to the country and its commerce.

## 60 Dictation. Practice 8 hours. Credit 23/3.

Prerequisite: Bus. 7-8-57.

The work on the manual and that of dictation are by no means separate and distinct, since dictation begins early in the theory work, and theory continues through dictation. However, the second semester of the work is more largely dictation. Before advancing to office practice the student should develop sufficient ability to write new matter from dictation at an average speed of seventy-five words a minute for a period of half an hour. New matter at the rate of 100 words a minute for five minutes, transcribed accurately, is required for graduation.

## 62 History of Commerce. Class 3 hours. Credit 3.

In this work the student is given information regarding the origin of commerce and its relation to civilization, its connection with the development of different countries.

# **402 Office Administration.** Class 1 hour, office work 2 hours. Credit 12/3.

Prerequisite: Bus. 101, 102.

In this course the principles underlying the organization and management of an office and the employes are carefully analyzed. The following subjects are examined: The office, equipment, heating, lighting and ventilation; office employes, their selection, training, experience and salary; office appliances; mechanical aid in office work; relation between manager and employes; human touch, efficiency; office records and systems; correspondence filing, card indexing, order systems, credits, collections, advertising, sales, and the purchase and handling of supplies.

## THE SCHOOL OF VETERINARY MEDICINE

L. L. LEWIS, Dean

The growing importance of the livestock industry of the State has made a course in Veterinary Medicine a necessity at the Oklahoma Agricultural and Mechanical College. The work is so outlined as to provide a thorough and well balanced course of instruction, leading to the degree of Doctor of Veterinary Medicine upon its completion.

The entrance requirements to this course of study are as follows: The completion of four years high school, or its equivalent in work here at the A. and M. College. This course is open to men only.

Candidates for the degree of Doctor of Veterinary Medicine must have attained the age of 21 and have satisfactorily completed all required work in conformity with College regulations.

There are many opportunities in professional and scientific work for young men of thorough training in veterinary science. In order to meet the demands that are made on those entering either the field of private practice or positions requiring technical knowledge, the veterinarian must have a good general education in addition to the specialized work in veterinary science.

Prominent among the fields open to veterinarians of thorough training are:

- 1. Private Practice.—There are many good fields for work not only in Oklahoma, but in other Southern States. The growing interest in the South in livestock production will increase the opportunities in this field.
- 2. Civil Service.—Much important work in the United States Department of Agriculture is open only to veterinarians who are graduated from accredited veterinary colleges.
- 3. State and City Work.—The position of State and Assistant State Veterinarians and municipal food inspectors are open as a rule only to qualified veterinarians. There are also desirable positions as veterinarians in the army service.

4 2 2-3

2 2-3

(2)

#### COURSES IN THE SCHOOL OF VETERINARY MEDICINE

The following outline of study represents the required work in the School of Veterinary Medicine. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate a student must earn 36 credits per year, or a total of 144 credits, not including any credit given for military science or physical training. Students will not be allowed to register in less than fifteen nor more than twenty credit hours, except by special permission.

In the outline below, figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

FIRST SEMESTER			SECOND SEMESTER
Anat. 101	Hours. (8) (4) (4) (4)	Credit. 5 2-3 3 1-3 4 1-3 4 1-3	Anat. 102 3 (8) 5 2-3 Histol. 102 3 (4) 4 1-3 Embryol. 402 2 (4) 3 1-3 Chem. 102, General Chemistry 3 (4) 4 1-3
SOPHOMORE YEAR			
FIRST SEMESTER H	ours. (	Credit.	SECOND SEMESTER Hours. Credit.
Anat. 201	(6) (2) (4) (4)	4 3 2-3 3 1-3 4 1-3	Anat. 202 3 (8) 5 2-3 Mat. Medica 202 3 (2) 3 2-3 Pathol. 202 2 (4) 3 1-3 An. Husb. 102, Market
An. Husb. 201, Breeds of Livestock 2	(4)	3 1-3	Types of Livestock 2 (4) 31-3
		JUNIOR	YEAR
FIRST SEMESTER			SECOND SEMESTER
The. & Prac. 301	(4) (2) (8)	Credit. 3 4 1-3 2 2-3 3 2 2-3 SENIOR	The. & Prac. 302
FIRST SEMESTER			SECOND SEMESTER
	ours. (	Tredit.	Hours, Credit.

2-3

322

The. & Prac. 401 ...

Clinic 401

Surgery 401 3
Clin. Diag. 401 3
Dentistry 401 2
Parasitology 401 2

The. & Prac. 402 ....

Lameness and

Shoeing

Surgery 402 ..... Obstetrics 402 .....

Meat Inspection 402 ..... 3 Clinic 402 .....

#### DEPARTMENT OF VETERINARY MEDICINE

L. L. LEWIS, Professor W. P. SHULER, Assistant Assistant E. V. ROBINETTE, Lecturer

The equipment to be used for instruction in Veterinary Medicine will include that of the laboratories of Bacteriology, Physiology, Zoology, Chemistry, etc. Such facilities will enable students to undertake their work with all the conveniences and equipment afforded by well established courses of instruction.

## SUBJECTS

101 Anatomy. Class 3 hours: laboratory 8 hours.

Osteology and Myology of head and neck.

A comparative study of the skeletons of domestic animals and a dissection of the muscles of the head and neck of the horse. Instruction in anatomy extends over a period of two years and is given by lectures, recitations and laboratory work. Each student is required to make one or more complete dissections of the horse, with comparative dissections of the trunk and viscera of other domesticated animals.

102 Anatomy. Class 3 hours: laboratory 8 hours. Myology of the Thoracic Limb and Trunk. Prerequisite: Anat. 101.

201 Anatomy. Class 2 hours; laboratory 6 hours, Myology of Pelvic Limb and Splanchnology.

Prerequisite: Anat. 101, 102.

In addition to the dissections of the muscles and ligaments of the pelvis and hind limb, dissections of the organs and viscera of the trunk will here be commenced and continued through the next semester.

202 Anatomy. Class 3 hours; laboratory 8 hours.

Angiology and Neurology. Prerequisites: Anat. 101, 102, 201.

The work of this semester will be a continuation of the dissections of the viscera and will include a special study of the circulatory and nervous systems of the horse. Surgical regions are especially emphasized.

Text: Comparative Anatomy of the Domestic Animals, Sisson.

101 Histology. Class 2 hours; laboratory 4 hours.

Histology is microscopic anatomy, and in the allotted time the student is required to collect, prepare and make drawings of all the different ussues of the body. This course is necessary in order that the later instruction in the various disease processes may be fully understood.

102 Histology. Class 3 hours; laboratory 4 hours.

A continuation of the work of the previous semester.
Text: Histology and Microscopic Anatomy, Ferguson.
References: Piersol, Stohr, and Bohm and Davidhoff. Gould's

Pocket Medical Dictionary.

#### 201, 202 Materia Medica. Class 3 hours: laboratory 2 hours.

Materia Medica is a subject that deals with the origin, derivation, physical and chemical properties of medicinal agents. In connection the art and science of compounding is taught two hours per week throughout the two semesters. The student is brought in actual contact with the different substances, and as far as possible taught the art of compounding.

Text: Materia Medica and Therapeutics, Winslow.

#### 201, 202 Pathology. Class 2 hours; laboratory 4 hours.

A study of the effect of disease processes upon the body tissues, secretions and fluids is here undertaken.

Text: Veterinary Pathology, Kitt.

# 201 Comparative Physiology. Class 3 hours; laboratory 4 hours.

By aid of lectures, demonstrations and tests the comparative physiology of the domesticated animals is presented in a thorough and practical manner. The laboratory work offered in connection includes considerable work in milk and urine analysis.

Text: Veterinary Physiology, Smith.

# 301 Theory and Practice. Class 3 hours.

Theory and Practice includes a study of the diseases of domesticated animals, their diagnosis and treatment as met in routine practice. This subject is taught for two years, and in that length of time it is intended by means of lectures and clinics to acquaint the student with as great a variety of abnormal conditions as possible, and instruct him in their diagnosis and treatment.

# 302 Theory and Practice. Class 4 hours.

Prerequisite: Theory and Practice 301.

# 401 Theory and Practice. Class 4 hours.

Prerequisite: Theory and Practice 301 and 302.

# 402 Theory and Practice. Class 4 hours.

Prerequisite: Theory and Practice 301-302, 401.

This semester's work deals with the different phases of infectious diseases, their diagnosis, control and eradication. Textbooks for all courses are the same.

Text: Pathology and Therapeutics of the Diseases of Domesticated Animals, Huytrea and Marek.

References: Law, Hoare, Friedeberger and Frohner.

# 301 Surgery. Class 3 hours; laboratory 2 hours.

The application of modern surgical methods to Veterinary medicine is yet in its infancy and a great field is here awaiting the well trained practitioner. It is the attempt of this course to teach the student the art and science of surgical interference, and the technique is especially dwelt upon in graded exercises beginning with the care and sterilization of instruments; methods of restraint, and studies of the action of the anesthetics and the different modes of administration.

# 302 Surgery. Class 3 hours; laboratory 2 hours.

Prerequisite: Surgery 301.

401 Surgery. Class 3 hours; laboratory 2 hours.

Prerequisite: Surgery 301, 302.

The laboratory work of Surgery 401 and 402 consists of a review of the anatomy of the surgical areas of the body, the intention being to thus bring out the practical side of the previous course in anatomy.

402 Surgery. Class 3 hours; laboratory 2 hours.

Prerequisite: Surgery 301-302, 401.

No school of medicine is stronger than its clinic. Here the student comes in actual contact with the problems relating to the care of sick animals. Hospital accommodations are furnished and squads of students assigned patients as they are presented. This work tends strongly to impress upon the student the practical phase of his previous training.

- 301 Clinic. Hospital work 7 hours.
- 302 Clinic. Hospital work 10 hours.
- 401 Clinic. Hospital work 12 hours.
- 402 Clinic. Hospital work 12 hours.

Each student is required to furnish himself with such white clothing as may be prescribed in the hospital rules.

401 Dentistry. Class 2 hours.

A study by means of models and bones and living subjects of the teeth of the domesticated animals and a consideration of their defects, causes and treatment.

Text:

# 401 Clinical Diagnosis. Class 3 hours.

In presenting this subject, it is the aim of the department to condense, review and emphasize the methods used in diagnosing disease.

Text: Outlines of Clinical Diagnosis, Malkmus.

401 Parasitology. Class 2 hours.

A study of internal and external parasites of the domestic animals is taken up and their methods of control and eradication discussed.

Text: Parasitology, Kaup.

402 Obstetrics. Class 3 hours.

After a brief review of obstetrical anatomy the work is devoted largely to a consideration of the diseases affecting these organs incident to parturition and the treatment.

Text: Veterinary Obstetrics, Williams.

402 Lameness and Shoeing. Class 2 hours; laboratory 2 hours.

Diseases of the foot and the effect of shoeing on their prevention and treatment. The instruction is of especial importance to the city practitioner.

Text: Horseshoeing, Merilatt; Diseases of the Foot, Reeks.

402 Meat Inspection. Class 3 hours.

Meat inspection takes up a review of post mortem symptoms of different diseases of food producing animals, especially those trans-

missible to man. The subject is of especial importance to the student who contemplates entering the Government service after graduation. Side trips are taken to the packing houses where the work of inspecting meat products is in operation.

Text: Meat Hygiene, Mohler and Eichorn.

The following subjects are given to students of agriculture in order that they may become familiar with some of the more common diseases that every stock owner must treat:

209 Veterinary Science. Class 3 hours; laboratory 2 hours.

A study of some of the practical points of the anatomy of the domesticated animals.

Text:

210 Veterinary Science (Physiology). Class 3 hours.

A fundamental course in the physiology of domesticated animals with especial emphasis on nutrition and locomotion.

Text: Veterinary Physiology, Smith.

310 Veterinary Science. Class 2 hours; laboratory 4 hours.

The more common diseases of livestock are discussed in this course. The laboratory work is intended to teach the student simple operations and familiarize him with practical means of restraining animals for operative purposes. Hygiene and the disposal of animals dead of infectious diseases is brought out and special emphasis is placed on the administration of vaccines, use of antiseptics, etc.

# SECONDARY SCHOOL OF OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

(FOR COLLEGE ENTRANCE)

S. A. MARONEY, Principal J. H. CALDWELL, Assistant J. O. MUNCIE, Assistant CAROLYN ISABEL BABB, Assistant (College Departments)

This course has for its purpose the preparation of students for entrance to the Freshman year of the six different College curricula. The work is slightly different in the second and third years in order to afford suitable foundations for the kind of college work ahead. A good deal of manual and practical activity is included. Much of the instruction is given by the College departments and with use of College laboratories. The work of the three years may be taken as complete in itself and leads to a high school diploma.

#### Admission

Entrance to the Secondary School requires: First, that applicant be 14 years old if residing where a four-year high school is not maintained, or 16 years of age if resident of a town having such high school. Second, that applicant present a diploma of graduation or certificate of promotion from the common schools of the State. Third, that an examination be passed in reading, spelling, penmanship, geography, United States history, grammar and arithmetic, if common school has not been completed. Maturity and capacity of the student to do the work are given due weight.

# SUBJECTS

11 12 Algebra. Class 5 hours.

The solution of practical problems is the aim more than purely theoretical knowledge. Positive and negative values, involved number expression, simultaneous equations, emphasis of use of graphs, high standard of thoroughness. To quadratics,

Text: First Principles of Algebra, Lennes and Slaught, revised

edition.

21 Plane Geometry. Class 5 hours.

Prerequisite: Alg. 11, 12.

Text: Plane Geometry, Stone and Millis (Part I).

22 Plane Geometry. Class 5 hours.

Prerequisite: Plane Geom. 21.

Text: Plane Geometry, Stone and Millis (Part II).

31 Solid Geometry. Class 4 hours.

Prerequisite: Geom. 22.

Text: Solid Geometry, Stone and Millis.

31 Algebra. For engineers.

Prerequisite: Alg. 12.

Powers and roots; quadratic equations; ratio; variation; proportion. Equivalent to Alg. 1a in old curriculum.

Text: First Principles of Algebra, Slaught and Lennes, revised.

32 Algebra. Class 4 hours.

Prerequisite: Alg. 12.

Is the third semester of algebra for the Schools of Agriculture, Commerce and Marketing, Science and Literature and Education. First part similar to 31. Corresponds to Alg. 1a in old curriculum.

Text: Slaught and Lennes.

34 Algebra. Class 4 hours.

Prerequisite: Alg. 31 or 32.

Is fourth semester of algebra for engineers. Includes Alg. 1b of old curriculum.

12 Arithmetic. Class 5 hours.

Common operations. Principles rather than short-cut calculations. The student's language and mental method looked after. Use made of equation. Required of all students.

Text: Complete Arithmetic, Wentworth and Smith.

21 Arithmetic. Class 3 hours. For engineers.

Prerequisite: Arith. 12, Alg. 12.

Advanced Course.

Text: Secondary Arithmetic, Stone and Millis.

21 Business Arithmetic. Class 4 hours. For Commerce and Marketing.

Prerequisite: Arith. 12.

Drills for speed and accuracy. Special calculations. Taught by Business Department.

11, 12 English. Class 4 hours.

Mostly writing under careful direction and individual correction. A first-year book. Second semester, English grammar. Writing continued. Short classics. Strengthened by Spelling 11 and 12, Penmanship 11 and 12.

21, 22 English. Class 5 hours.

English classics and composition. Classics listed in outline. Oral interpretations.

# SECONDARY SCHOOL OF OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

For College Entrance

#### SECOND SEMESTER Guidance 12 .... Spelling 12 ..... Penmanship 12.... Education 12 .... Domestic Art 12 English 12. Toward All College Courses Drawing 12 Woodwork 12 Arithmetic 12 Military 12 Algebra 12 Vocational Freehand FIRST YEAR Physical 60 <del>4</del> 889 99 FIRST SEMESTER Physiology 11 ....3 Education 11 .... Penmanship 11.... Military 11 ..... Ethics 11 ..... English 11 Algebra 11 Drawing 11 Woodwork 11 Science 11 Spelling 11 Freehand Elementary Physical

for Entrance to the Differ-Additional Work as Below Schools of the College

3 <del>4</del><del>4</del> <del>2</del>6

for Entrance to the Different Schools of the College Additional Work as Below

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33

# SECOND YEAR

					3	3
Toward All College Courses	SECOND SEMESTER	English 225	Plane Geometry 225	Modern History 225	Physical Education 22	Military 22
5	æ				3	(3)
Toward A	FIRST SEMESTER	English 215	Plane Geometry 215	Ancient History 215	Physical Education 21	Military 21

3 (4)

Botany 22... Dairying 22.

Structures 21.... (4) Livestock 21......3 (2)

Agriculture

SECOND SEMESTER Geography .. 22.. 3

FIRST SEMESTER

Woodwork 21 21.

Arithmetic

SECOND YEAR Engineering Forge 22....

6

Geography 22....3 Bookkeeping 22....

6

Arithmetic 21..4 Bookkeeping 21....

Business

Commercial

Commerce and Marketing

SECOND YEAR Science and Literature and School of Education	SSTER SECOND SEMESTER 23 (2)	Bota		Home Economics 21. (4) Domestic Art 22. (4) 23. (4) Botany 22. (4)
Scienc Scienc	Livestock 21 3 (2)	Woodwork 21 (Boys) Domestic Art21	Vocal Music 21 (2)	Domestic Art Domestic Art
		+		+
				+ 66

THIRD YEAR	School of Education	~	Solid Algebra 324 Okla. Hist. & Civics 34 (Teachers)	Government 32.4  Physical Education 32 (3) + Fr. or Ger. 31 4 Fr. or Ger. 3  Military 32 (3) Foods 31 1 (4) Foods 32
			-	+
		_	€	33
THIRD YEAR	Toward All College Courses	English 324	(Except Engineers) Physics 323 (4)	Government 32.4 Physical Education 32
THIRD	Toward All C	Finglish 314	Physics 313 (4) American History 314 Physical	Education 31 (3) Military 31 (3)
	+		+_	
THIRD YEAR Engineering	×	or Spanish 31.4 or Span. 324 Algebra 31 3 Algebra 344	Agriculture  Eng. or Ger. 314  Agriculture 312 (4), Agriculture 322 (4)  Solid  Algebra 324	ce and

# MESTER 32. 4 & 1

32...4

#### 31, 32 English. Class 4 hours.

32 not for engineers. Comprises, (1) English classics; (2) English grammar; (3) composition. First semester mostly literature and composition. Includes Guerber's Myths of Greece and Rome. Extends composition and literature. Individual correction. Second semester, thorough study of English grammar. Also themes. Continuation of literary reading, done mainly outside of recitation, but guided and tested by instructor. Classics listed in outline. Work similar to 1a-b-c of old curriculum. A good dictionary is necessary.

#### 21 Ancient History. Class 5 hours.

First half of year's survey of whole field of history. Oriental, Egyptian, Grecian, Roman, Medieval Europe to 1789. Making of historical maps and notebook required.

Text: Outlines of European History I, Robinson and Breasted.

# 22 Modern History. Class 5 hours.

Continuation of 21. The past 200 years of Europe. Completes a year of general history for teacher's grade and gives foundation for history courses of College. Maps and notes.

Text: Outlines of European History II, Robinson and Beard.

#### 31 American History. Class 4 hours.

Prepares to teach in common schools. Attention given to pedagogy of subject. Maps and charts used. Industrial features made prominent.

#### 31 Oklahoma History and Civics: Class 1 hour. For teachers.

Unique story of upbuilding of State industrially, politically and educationally. Special problems of the State. Many illustrative maps and charts. Includes survey of resources of State. Current events utilized for illustration.

Text: Oklahoma History and Civics, Roberts.

#### 32 American Government. Class 4 hours.

Facts and analysis of Federal Constitution. State and local units sketched. Made real by connection with current affairs.

Text: American Government, Hinsdale.

#### 11 Ethics.

All students meet in chapel for departmental announcements, class business, and lectures by members of the College Faculty. Writeup of lectures as required in English classes. Aim, to guide the young student in conduct, habits of study, and in "student activities", and thus promote the efficient college life.

#### 12 Vocational Guidance.

An attempt to direct student to wise choice of college course, as is now being done by the best school systems. It is best for selection of course to be made before entering second year. Method, class lectures, personal conferences and study of individual aptitudes.

# 11 Physiology. Class 3 hours, laboratory 2 hours.

Prerequisite: Common School Physiology.

Handled by the Science and Literature Department of the College. Charts, models, apparatus, laboratory methods and note making. An introduction and foundation for later study of sciences. Gives grade on teachers' certificates.

Text: Advanced Physiology, Conn and Buddington.

31, 32 Foods. One year. Class 1 hour, laboratory 4 hours. Required for Home Economics.

A popular, practical, non-technical course in cooking and its materials to meet the needs of public school teachers, housewives and students in other courses who desire to take it. No prerequisites.

31 Physics (elementary). Class 3 hours, laboratory 4 hours. Required in all courses.

Prerequisite: Alg. 11; Alg. 12; Plane Geom. 21; Plane Geom. 22.

Covers in an elementary way the principles of mechanics and heat.

Text: Practical Physics, Black and Davis.

32 Physics (elementary). Class 3 hours, laboratory 4 hours. Required in all courses.

Prerequisite: Phys. 31.

A continuation of course 31. A study of magnetism, electricity, sound and light.

Text: Same as for course 31.

Military. Three years' work required. 3 hours.

Consists of drill and military science. Last year required in College deducted if student completes three years of military in Secondary School.

Physical Education (men). 3 hours a week, 3 years' credit given, and is required.

Course 11. Free exercises, games, athletic dancing and mass class drills. A portion of each class period is devoted to talks on exercises, diet, rest, work, and the importance of correct hygienic habits.

Course 12. Elementary apparatus, work on buck and mats, outofdoor basketball, and track and field work. Hygienic talks.

Course 21. Mass drills with and without hand apparatus. Elementary work on horse and parallels. Rhythmic exercises and mat work. Hygienic talks.

Course 22. Mass drills with hand apparatus; more advanced work on horse and parallels, games, track and field work. Hygienic talks.

Course 31. Mass drills. Elementary work on horizontal bar and flying rings, with systematic graded work on the horse and parallels. Hygienic talks.

Course 32. Mass drills. Intermediate graded exercises on all apparatus. Tumbling. Athletic dances and games. Track and field work. Introductory lectures on physical education.

Physical Education (women). 3 hours a week. Courses 11, 12, 21, 22, 31, 32 required.

Calisthenics and gymnastics. Aims to give thorough work in graded gymnastics by means of free exercises with and without hand apparatus. Elementary folk play. Games and marching. Handled by College department of Physical Education for Women.

# 11 Elementary Science.

Lecture, demonstration and text. An introduction to general field of science: Chemistry, physics, biology, physiography; in brief,

to give useful information and stimulate interest in natural phenomena. Recognizes unity of sciences and psychological need of subject matter.

#### 21 Farm Structures and Equipment. Laboratory 4 hours.

This course considers briefly the suitable machines, structures and materials adapted to the various types of farming. Farm water supply. Sanitation. Labor-saving devices. Division of fields—fencing. Rough sketching of various farm structures.

# 31, 32 Agriculture (crop production). Class 2 hours, laboratory 4 hours.

A general course which deals with the fundamental principles' underlying the production of crops. Special attention is given those crops of most importance in the State. Selection of seed, seed testing and grading, cultural methods, and the general management of the crops are taken up. Rotations, green manures and commercial fertilizers, together with their relation to the maintenance of soil fertility are discussed. The most important insect enemies and diseases of the common crops and methods of their control are considered.

#### 22 Dairying. Class 1 hour, laboratory 6 hours.

Sanitary production of milk and cream. Farm buttermaking. Farm separators. Marketing products. Organization of local creameries and cow testing associations, community breeding, etc.

#### 21, 22 Livestock.

Course 21. Sci. and Lit., Sch. Ed., Agri.

Course 22. Sci. and Lit., Sch. Ed. (boys).

Characteristics of different breeds of horses, cattle, sheep and swine. Practice in judging.

Text: Bulletins, and Judging Livestock, Craig.

#### 11, 12 Freehand Drawing. Class 4 hours.

Required of all students. Includes Drawing 1a-b and Sub-Freshman Drawing of old curriculum. Eye training and manual control. Use of models, preferably "social" objects. Work closely related to Woodwork by choice of same models.

# 12 Domestic Art. Laboratory 4 hours.

Basketry, cord, raffia and reed work. Articles made are adapted for teaching hand work in grades.

# 21 Domestic Art. Laboratory 4 hours.

Sewing: Plain stitches applied to various articles, as towels, sewing aprons, etc. Patching and darning. Machine sewing. Seams. Simple undergarments. Study of textiles and fibers used.

# 22 Domestic Art. Laboratory 4 hours.

Prerequisite: D. A. 21. Sewing. Continuation of D. A. 21.

# 23 Domestic Art. Laboratory 4 hours.

Home economics. Different kinds of elementary practical designing and decoration connected with home making. Personal culture and artistic feeling not disregarded in aim, but is not a course in classical art. Varied to some extent to suit individual. By Art Department of College.

#### 21, 22 Vocal Music.

For teachers who elect it while in College as professional training, and required in Secondary School to enter School of Education.

Course 21. Beginning. Staff, cleffs, notes, signatures, scales, intervals, transposition and triads. Gives grade for third grade certificate.

Course 22. Continuation of 21. Pedagogy of the subject in school grades. Rote songs, exercises. Conduct of classes. Ear training.

Text: School Music, J. W. Brewer.

#### 22 Botany. Class 3 hours, laboratory 4 hours.

Elementary. Includes la and part of 1b in old curriculum. A study of plant forms, mainly the higher, together with the more important plant activities. Living material is used as much as possible in order that the student may gain first-hand information. Latter part of semester devoted to cells and cellular structures. One or more types from each large plant group.

Text: Bergen and Davis.

# Foreign Languages-German, Latin, French, Spanish. Class 4 hours.

The courses are for beginners first and second semester. One year of some one language is required of all students except those who are preparing for the Schools of Commerce and Marketing or Agriculture. German may be elected for the School of Agriculture.

#### 31, 32 German.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Written and oral translations from English to German. Conversation.

Text: German Grammar, Paul V. Bagon; German Life, Philip S. Allen.

#### 31, 32 Latin.

Drill on the essentials of Latin grammar, acquiring of vocabulary, reading stories from Roman history, anecdotes and fables.

Text: Latin Lessons, Smith.

#### 31, 32 French.

Essentials of French grammar with the more common irregular verbs. Reading of about one hundred pages of easy prose. Careful training in pronunciation.

Text: Nouveau Cours Français, Fontaine; Contes et Legendes, Guerber; French Reader, Aldrich and Foster.

#### 31, 32 Spanish.

A practical and thorough course conforming to the most advanced methods of teaching; careful treatment of pronunciation. The student realizes that he is learning a living language.

Text: A Spanish Grammar, Coester; Elementary Spanish Reader, Harrison.

# Woodwork, or Manual Training.

Course 11. Shop 4 hours. Boys and girls. First bench work in wood; sawing, planing and jointing; use and care of tools. After few exercises for control, useful household pieces are made.

Course 12. Shop 4 hours. Girls may take this or Domestic Art 12 (basketry). Is continuation of 11. More difficult and more individual in last part. Center and chuck turning.

Course 21. Shop 4 hours.

Forge 22. Shop 4 hours. Engineers. Blacksmithing, iron and steel; drawing; upsetting; welding and tempering.

22 Commercial Geography. Class 3 hours.

Is modern industrial, commercial geography. Of value to teachers in common schools. Com. & Mark. and Engineering.

- 21, 22 Bookkeeping. Practice 9 hours.
- 31, 32 Typewriting. Practice 6 hours.

  Commerce and Marketing. By Business Department.

# OTHER DEPARTMENTS

#### DEPARTMENT OF MUSIC

Joseph Watson, Director; Instructor in Voice Culture and Public School Music
Jane Porter Sloss, Instructor in Piano and Music Theory
Roberta Burgess, Assistant in Piano
Kate Vermillion, Assistant in Piano
Theo. Chr. Rude, Instructor in Stringed Instruments
Frank E. Miller, Instructor in Wind Instruments, Band and Orchestra Conductor

#### Courses in Music

FIRST SEMESTI	ER				SECOND SEMEST	TER		
Piano	1 1 1	Pr.	Cr. 1 1 1 1 1	7	Pub. School Music Vocal Sight Reading Music Theory or Harmony Choral Practice		Pr. 2 2 2 2	Cr. 2 2-3 2-3 2-3

Students should register by numbers.

Music makes broad claims upon the attention of students because of its generally recognized educational value, its cultural influence on the home life of the people, and its professional claims upon the more talented students of music. The instruction in this department tends toward the musical education and training of a large portion of the student body, and free instruction is offered all regular students who desire to select music, provided satisfactory progress is made from month to month in the subject.

Accomplished musicians are always in demand as directors, singers, teachers, accompanists and organists for church, concert and public school music work. The Music Department offers earnest students the opportunity to acquire scholarly musicianship.

As a matter of College policy, students will not be allowed to undertake music to the exclusion of other subjects; since it is the purpose of the College to distribute these studies to the greatest possible number of students attending this institution, without

offering university or conservatory courses therein. Students may take only one course in music during any term, unless additional privileges are granted by the Faculty.

The following courses enable the student to obtain a comprehensive and practical knowledge of music and to acquire skill and power in interpretation. The time required for completing a course will depend upon previous preparation, the talent, ability and character of the work of each student, but all have the privilege of advancing as rapidly as is consistent with good work.

#### COURSES IN VOICE CULTURE

# Elementary. Two lessons per week.

Exercises are given for deep breathing and breath control; for purity of production, freedom of action and blending of the registers, correct attack and resonance, pure vowel production and distinct articulation.

# Intermediate. Two lessons per week.

This course gives great attention to tone placing, elements of style and phrasing, stacatto, legato and portamento delivery, and exercises tending to the greater flexibility of the voice. Songs of medium grade freely used.

# Advanced. Two lessons per week.

This course is devoted to a study of tone color, agility, and all musical ornaments—trill, turn and gruppetta, appogiatura, acciaccatura, mordente—mezza-di-voce, phrasing and style, and advanced teaching by means of difficult exercises and songs, recitatives and arias from opera and oratorio.

All students in the elementary voice class are urged to attend the sight-reading class unless excused by the Director. Attendance at all recitals is required of every student. When requested, students in any grade must sing in recital and from memory.

#### COURSE IN PUBLIC SCHOOL MUSIC METHODS

Credit for work in this subject at some college or State normal school will be freely given, but such credit should be claimed before entering the Senior year.

This course is carefully classified for each of the grades in the public schools, the work being outlined to develop the vocal ability and musical education of the pupils to suit the particular condition of the mind and the voice of the child at the average age in each grade. This outline is somewhat as follows:

Rote songs for little folks. Study of "staff", "notes", "scale". Location of "do", or the keynote, in nine different keys. Sight reading and singing, by syllable and by letter. Much attention given to tone quality and rhythm. Complete analysis of songs—as to key sig-

nature, meter signature, tempo signs, marks of expression, the different values of notes used, etc. Written work from oral dictation of tones, syllables, or letters. Written work from dictation of rhythm. Transposition of songs into different keys. Special practice in music class conducting. Singing at sight, rounds, and two, three and fourpart songs. Thorough practice writing and singing major, minor and chromatic scales. "Spelling" and "pronouncing" different triads or chords. A little study of the elements of harmony.

#### PIANOFORTE COURSE

# Elementary-Piano. Two lessons per week.

Hand formation, finger exercises, scales, arpeggios and elementary studies, etc. Sonatinas and pieces of Kuhlau, Clementi, Loeschorn, Reinecke, Schumann, etc.

#### Intermediate-Piano. Two lessons per week.

Technical exercises, scales, arpeggios and octaves. Study of Czerney, Cramer, Clementi, etc. Pieces by Mozart, Haydn, Bach, Schumann, Grieg and other modern composers.

#### Advanced-Piano. Two lessons per week,

Studies by Clementi, Henselt, Moszkowski, Tausig, Chopin, Moscheles, etc. Pieces by Bach, Beethoven, Chopin, Schumann, Liszt, Mozart, Rubinstein and modern composers.

#### THEORY OF MUSIC

This course comprises studies in the following: Notation, scales, rhythm and accent, musical terminology, intervals, chords and cadences, inversions, natural and artificial groupings and musical ornaments. The advanced theory will deal with harmony, concluding with form and composition.

#### VIOLIN COURSE

# Elementary.

Careful attention given to proper position of holding the violin and bow. Elementary violin lessons from modern methods. Scales and chords from first to third positions. Studies by Wohlfahrt, Tours, Sevcik, Grun and Scholz, Kayser, etc. Pieces and ensemble.

#### Intermediate.

Major and minor scales in all positions. Studies by Mazas, Alard, Sevcik and Kreutzer. Pieces by Leonard, Weiniawski, Vieuxtemps, etc. Sonatas by Corelli, Tartini, Handel, Mozart and Beethoven. Easy concertos by modern composers. Sight playing, orchestra, string quartet.

#### Advanced.

Technique by Sevcik, studies by Kreutzer, Fiorillo, Rode. Concertos by Viotti, Rode, Kreutzer, Bruch, Saint-Saens, etc. Orchestra, ensemble, string quartet, class.

#### Viola, Violoncello and Contrabass Course.

These instruments may be studied by similar grades to those in the violin course, or may be carried only up into the Intermediate Grade. Pupils having reached a fair degree of proficiency on any stringed instruments are required to play in the regular College orchestra.

#### COURSE IN WIND INSTRUMENTS

Students wishing to take lessons on any wind instrument receive two lessons per week on instruments.

#### The Band.

Instruction will be given by regular College band leader in the use of brass, wood-wind and percussion instruments. To become a member of the College band the student must pass a satisfactory examination before the Director as to knowledge of music and ability to perform on certain instruments before securing recommendation to the President for transfer to the band. The members are required to attend practice three times per week and to perform in public by authority of the President. There is no charge for instruction in the band. The College furnishes instruments, music and music stands to members of band and orchestra. Other students pay \$1.00 per month in advance for instruments used in practice when furnished by the College. Those desiring private lessons in band instruments will consult with the Director of the department.

#### The Orchestra.

Any College student who plays on any string or wind instrument has the privilege of the orchestra on approval by the Director of Music.

#### DEPARTMENT OF PHYSICAL EDUCATION FOR MEN

JOHN CORBETT, Director A. M. COLVILLE, Assistant P. J. DAVIS, Coach

Much of the success of a young man or woman in college and in life after graduation depends on good health. The Oklahoma A. and M. College believes in the old adage, "A sound mind in a sound body". The Department of Physical Training aims to create and maintain a vigorous state of health in every student in the College, and its work is so diversified that it meets the individual needs. It strives to keep the student body in the best possible physical condition, for and during their college course, and to lay the foundation for proper living and care of the body.

The Men's Gymnasium is a large, well-lighted room 40x60 feet and contains all of the necessary apparatus for gymnasium work of all kinds. The outfitting is done with the idea of giving the student advantages to be found in any well regulated college gymnasium. Dumbbells, barbells and Indian clubs will be found there for mass class drills, and of the heavier apparatus there are the flying rings and traveling rings, the horse, the horizontal bar, the parallel bars, mats, jumping standards, etc. Boxing gloves and fencing foils are also supplied to those desiring to enter into this special work.

In direct connection with the gymnasium is a large locker room with 600 steel and wooden lockers, benches, and a well equipped shower room with eight showers for hot and cold baths.

Every student in the College is expected to do some work to keep himself in the best possible physical condition.

Students of the Secondary School and Freshman classes, Business and Short Courses are required to do a certain amount of work, for which they receive credit necessary for graduation. There are also classes organized for the other students of the College.

An athletic field for football, baseball and track and field athletics is provided by the College and maintained by the Athletic Association. Students are encouraged to take part in athletic and out-of-door sports. College and class teams are organized and maintained by the Athletic Association, and each team is under the supervision of a trained instructor.

Athletics are a part of the physical training work, but whether a student participates in them or not is optional. No student is allowed to become a member of a team until he has been examined by the Director and proven that he is physically fit. A high standard of scholarship is also required of all members of the College teams.

Each student in the Men's Department must provide himself with a gymnasium suit so that there can be a complete change of clothing after the physical training work. This suit consists of a black sleeveless jersey, black running trousers and soft-soled shoes. These can be procured at a local store at a cost of not to exceed \$2.00.

#### COURSES FOR MEN

# Physical Examination—Preliminary

A thorough physical examination is required of all entering students. This examination consists of measurements, strength tests, examination of the eyes, ears, nose, throat, lungs, heart and other vital organs, and special stress is laid upon physical deformities and inequalities. These defects are pointed out to the student and exercises to correct them are prescribed. Where necessary, special attention and advice are given to the student. An examination is taken at the beginning and at the end of the first year, and at the end of each year after that.

A gymnasium handbook containing chapters on personal hygiene, diet, exercise, prescription, injuries and an anthropometric table is given to each student, who is required to plot his measurements and, upon completion of the gymnasium course, the book becomes his property.

#### FRESHMEN

# 101 Physical Education (First semester).

Required of the Freshmen of the College. The work of the Freshman class in this course consists of games, athletic dancing, boxing, wrestling and mass drills with and without hand apparatus. Graded systematic work on all apparatus, tumbling and indoor track work. Part of the work will consist of lectures on physical educational subjects. Three times a week. Credit given. Required for graduation.

#### 102 Physical Education (second semester).

Required of the Freshmen of the College. Advanced work on apparatus, tumbling, athletic dancing, games and drills. The latter portion of the semester will be devoted exclusively to work out of doors, with emphasis on track and field athletics. Lectures on physical educational subjects. Three times a week. Credit given. Required for graduation.

The following courses in theory may be offered for college credit that the science of physical education may be better understood, that systematic training for athletic events may receive more encouragement, and that men who are expecting to teach in high schools and academies may have the opportunity of fitting themselves to supervise or teach physical training.

# 103 Physical Education (first semester).

Freshman elective.

Anatomy (large muscle groups), personal hygiene, systems of training, Swedish theory and nomenclature. Once a week. Attendance at regular gymnasium classes compulsory.

# 104 Physical Education (second semester).

Freshman elective.

Continuation of Course 103, during second semester, with special assignments in track and field work. Attendance at regular gymnasium classes compulsory.

# 201 Physical Education (first semester).

Sophomore elective.

Anatomy and kinesiology, anthropometry, first aid, applied hydrotherapy and massage. Special lectures. Once a week, with assignments in gymnasium and field.

# 202 Physical Education (second semester).

Sophomore elective.

Continuation of Course 201 during second semester, with special assignment in track and field work.

# 301 Physical Education (first semester).

Junior elective.

History of physical education, physiology of exercise, physical diagnosis (methods of examination for bodily defects). Organization, construction and equipment. Once a week, with assignments in gymnasium and field.

# 302 Physical Education (second semester).

Junior elective.

Continuation of Course 301 during second semester, with special assignments in track work.

# 401 Physical Education (first semester).

Senior elective.

Anatomy (musculature), medical gymnastics, prescription of exercises, paidology, administration and management, public school and playground methods. Assignments in gymnasium and field. Three times a week.

#### 402 Physical Education (second semester).

Senior elective.

Continuation of Course 401 during second semester, with special assignments.

NOTE.—Courses 103 to 402, inclusive, may be elected only with the consent of the Director of Physical Education and by vote of the Faculty.

#### FOR BUSINESS STUDENTS

# 501 Physical Education (first semester).

Required of students in the business class.

Similar to Course 101, but more advanced. Mass drills in class and apparatus work of the heavier type. Games, mat exercises and lectures on physical education. Three times a week. Credit given. Required.

# 502 Physical Education (second semester).

Continuation of the work begun in course 501, with basketball and track and field work in the spring. Lectures on physical education. Three times a week. Credit given. Required for graduation.

# 601 Physical Education.

Required of students in the Short Course in Agriculture. Work in mass formations and on apparatus, with an emphasis on coordination. Lectures on personal hygiene and first aid. Three times a week.

# 700 Physical Education (special classes).

Open to all students.

A. Cross-country running during the fall and spring. Those students desiring to do so may substitute a certain amount of cross-country running for the regular gymnasium work.

B. Wrestling.—A class in wrestling, in which all of the holds, breaks and counters are given, is formed. A student may substitute one hour's work a week in wrestling for one hour of his regular gymnasium work. One hour per week.

- C. Boxing.—Class in boxing, in which all of the blows, parries, guards and counters are given, is formed. Students may substitute one hour's work in boxing for one hour of regular gymnasium work. One hour per week.
- D. Class in Fencing.—Open only to upperclassmen, with the consent of the Director.
- E. Special Class.—A special class is formed for those who, on account of deformities, are unable to take the regular work of the department. The work of this class is suited to the needs of the individuals.
- F. Individual corrective work for all students who show in their examination the need of such work. The idea of this work is to correct deformities so that the student may get the maximum value from the regular class work.
- G. A class is organized and maintained for Sophomore, Junior and Senior students. Meets twice a week. This work is optional with the students.
- H. Advanced Gymnastic Class.—Open to all students. A special class is formed for students who desire to do advanced work on the horse, parallel bars, horizontal bars, flying rings, mats, tumbling and clubswinging. This comprises the regular gymnasium team for exhibition purposes. Three hours per week.

#### Athletics.

Teams are maintained in football, baseball, track and basketball, gymnastics and wrestling. During the time any student is a member of one of the above teams he will be excused from all gymnasium work and will be given credit therefor.

#### DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

ANNA MILLER, Director MARY BARLOW, Assistant

The gymnasium for women, located in the Woman's Building, is an unobstructed room 32x63 feet, and is equipped with all of the modern gymnasium apparatus. There is a locker and dressing room in connection, supplied with a large number of steel lockers. There are also shower baths. In the rear of the building are the women's outdoor tennis courts.

A regular costume is required. In order that these may be uniform in pattern and color, they are ordered by the College. The cost of the suit, including shoes, is about \$6.00.

At the beginning of the first semester each young woman is given a careful examination. Personal history, measurements, deformities are taken and recorded, with an examination of the vital organs. This examination is repeated during the second semester and comparison made at both examinations with the average. Suggestions and prescriptions suited to the needs of the individual are based upon this examination.

Physical training is prescribed for all Freshman, Sophomore and Business girls, including special students, throughout the College year, three periods a week.

The prescribed courses are designed to secure a high degree of organic power, harmonious physical development, and a reasonable degree of skill and grace.

#### 101-102 Three hours per week,

Required of members of the Freshman class and Business class.

The work of these classes consists of floor work, emphasizing carriage and coordination of muscles. Movements with apparatus, progressive back and abdominal exercises, and gymnastic games are given.

#### 103-104.

Required of members of the Sophomore class.

This course consists of floor work, apparatus, with more advanced work than Courses 101-102. Indoor, outdoor and folk games are taught.

#### 105-106-107-108.

Optional and elective for Junior and Senior girls in the Schools of Science and Literature, Education and Home Economics.

# A. First semester. Plays and games, including theory. Credit 1.

In this course the theory of plays and games will be studied. It is also the purpose to provide explanation of and practice in a considerable number and variety of the playground games; dramatic games; traditional games and song plays; games of imitation, gesture, choosing and catching; games which appeal to the young by the stirring energy of their movement and their imaginative pantomime. Studies are made of children's games from all parts of the world, and of the simplest dances of primitive people and of the folk of Europe.

# B. Second Semester. Theory of Physical Education. Credit 1.

A study is made of the Swedish days order of gymnastics and calisthenics. The following will also be considered: History and development of physical education; growth and development of the child; personal hygiene; how to observe and criticise the work of pupils, and plan and arrange lessons. This course will also include methods and exercises used for corrective and therapeutic purposes. A general treatment of massage is given. In specific cases, insufficient osseous development, fractures, dislocations, sprains, muscular rheumatism, colds, insufficient respiratory power and neuralgic headache are considered.

# 101 Personal Hygiene. Credit 1.

This course considers health in its social and economic aspects and presents personal hygiene as the study by means of which health and efficiency are improved and conserved; facts and principles relating to the body's construction and function which may strengthen the argument in favor of hygienic living; improvement of health and prevention of diseases.

#### CORRECTIVE GYMNASTICS

For those unable to take the work of the regular required courses this course will be substituted. Hours to suit.

#### ATHLETICS

- A. Basketball.—Each class has a basketball team, and an interclass schedule is played.
- B. Field hockey and cross-country walking. Open to all classes during the months of October, April and May.
- C. Tennis.—Tennis is played on the College courts during favorable weather. A tennis club is formed which is under the direction of the Girls' Athletic Association. The club is open to all girls of the College. The dues are 50 cents per year.
- D. May Festival Dances.—For the May Festival each year the Girls' Athletic Association gives a May pole dance, composed of the rhythmical plays and games taught in the gymnasium throughout the school year.

#### DEPARTMENT OF MILITARY SCIENCE AND TACTICS

GEO. W. EWELL
First Lieutenant Third Infantry
Professor of Military Science and Tactics
M. McDonald
Sergeant Major United States Army, Retired
Assistant

This institution, being one of the beneficiaries of the Act of Congress of 1862, instruction in military tactics is made compulsory.

The department is in charge of an officer of the United States Army, detailed by the War Department, as professor of military science and tactics.

Military discipline is exercised with firmness, kindness and justice. It tends to cultivate habits of punctuality, alertness and the sense of personal responsibility. It also teaches attention to detail, cleanliness of person and of dress, a high sense of honor and respect to those in authority.

It helps the student to prepare himself the better for any position in life, because employers like to find men who are imbued with the idea of doing exactly as they are instructed by one who is authorized to direct them, and who have been trained to exercise quick yet sound judgment in any emergency that arises concerning which they have no definite instruction. These qualities are thoroughly inculcated in any person by a military training, such as the College endeavors to give them. In addition, the drills give a graceful carriage to the student, assist in the promo-

tion of the health of the individual, and are an added benefit to the gymnasium work of the College.

Former President Taft, on February 25, 1911, following a review of 1,400 cadets of the University of Illinois, wrote as follows to the President of that institution: "We are all in favor of college athletics, but one of the defects of athletics is the tendency to confine work to those who are naturally best adapted to it, while the great student body takes no active part in the games. This is not true of military training that comes from the organization and maintenance of a school regiment.

The course of instruction is made to conform strictly to the provisions of General Orders No. 70, War Department, series of 1913. In compliance with the requirements of that order, the course is both practical and theoretical, and will be applied as follows:

#### Practical

- 1. Infantry Drill Regulations.
- 2. Advance Guards, Rear Guards, Outposts, Messages and Orders.
  - 3. Marches, Map Drawing and Entrenchments.
- 4. Ceremonies of Review, Inspection, Parades, Escort of the Colors, and Guard Mounting.
- 5. Gallery Practice, Nomenclature of the Rifle, Sighting Drills, Position and Aiming Drills, and Deflection and Elevation Correction Drills.
  - 6. Range Practice with Service Ammunition.
  - 7. Field Problems with Blank Ammunition.

All students not physically disqualified are required to take the practical instruction during the first two years of their attendance at the College. During the first semester there will be three hours' drill per week, while the second semester will be devoted to two drills per week with one hour's instruction in military science in the subjects as set forth in the following table:

# Theoretical Military Science

- 1. Infantry Drill Regulations, United States Army, 1911.
- 2. Small Arms Firing Manual, 1913.
- 3. Field Service Regulations, United States Army, 1914.
- 4. Manual of Guard Duty.

- 5. Outlines of First Aid to the Injured.
- 6. Lectures on various military topics.

Satisfactory completion of the prescribed work is required before graduation.

Students entering the College from other institutions where officers of the army are on duty will be given credit for the work for which they hold certificates.

Students who show aptitude for the military service are recommended for appointment as second lieutenants in the army. Positions in the Engineer Corps of the army are open to certain students of the Engineering Departments of the College. A list of students who have shown special ability in engineering is kept by the War Department in order to be able to locate good engineers in case of need. Graduates of the College are also selected for service in the Philippine Constabulary and are not required to take the mental examination if recommended by the College authorities.

# Equipment

The War Department has supplied the College with 560 U.S. magazine rifles, cal. .30, model of 1898, 40 U.S. magazine rifles, cal. .30, model of 1903, 16 U.S. magazine rifles, cal. .22, and 600 sets of infantry equipment. Swords, targets, target supplies, ammunition for all rifles and cleaning material are furnished to the College free of charge by the War Department.

Students are required to furnish themselves with the regulation uniform, which is modeled after the U. S. Army service uniform.

# Organization

All young men are required to enroll in the Military Department.

Those who are entitled to be excused must at the time they enroll make a written application to be placed on the unassigned list. All students who are on the unassigned list will be excused from all military duty.

The Corps of Cadets has been organized into a regiment consisting of a band and three battalions of four companies each.

Commandant of Cadets
GEORGE W. EWELL
First Lieutenant Third Infantry

Assistant Commandant of Cadets
M. McDonald
Sergeant Major, United States Army, Retired

# Regimental Staff

Captain and Regimental Adjutant, CLARENCE ROBERTS.
Captain and Quartermaster, Guy Mantle.
Captain and Commissary, I. F. Huddleston.
Regimental Sergeant Major, Grady Thompson.
Regimental Color Sergeant, Otto A. Edson.
Regimental Color Sergeant, John Fisher.

# Unassigned List

Major James S. Connell. Captain A. A. Anderson.

# Regimental Band

Leader, Professor Frank E. Miller, Department of Music. Chief Musician, P. K. Anderson.

Principal Musician, H. L. PECK.

Drum Major, Julian Conn.

Sergeants: C. M. LOVELL.

W. H. PATTERSON. CLYDE MULLEN. CALVIN MCKEE.

C. L. HALL.

B. O. CORBIN.

Corporals: W. J. Green.

H. P. TURNER.

O. G. WILSON.

W. R. MARSH.

B. C. HARRIS.

CARSON KELLEY.

C. W. Lewis.

C. E. Brewer.

ALAN APPLEGET.

J. J. CANPIELD.

L. L. SWIM.

#### First Battalion

Major, M. E. Olmstead
First Lieutenant and Battalion Adjutant, Joe Blackburn
Second Lieutenant and Battalion Quartermaster and Commissary, Rollin M. Rose

	COMPANY A	COMPANY B	COMPANY C
Captain	E. E. WILLIAMSON	J. R. REEVE	J. C. Woodson
First Lieutenants	G. R. CHOATE	J. L. Robinson	WILEY SCOTT
Second Lieutenants	J. B. BUTLER EUGENE KILE	H. D. VENTERS	RALPH HAVENSTRITE
First Sergeants	R. SCRIVENER	E. E. GRAHAM	H. H. SHILLER
Sergeants	A. W. HARDY JEFF CAMPBELL H. K. WEBBER NICK FENNEMA	Gordon Stout J. A. Jackson F. C. Notson George Tippie	ROY KILPATRICK PAUL HEILMAN W. J. MASON J. R. THOMAS
Corporals	C. S. Andrews A. W. Vance J. M. Wilson ED Kramp R. Abercrombie	T. B. MITTENDORF O. M. SAVAGE PAUL HOGGARD G. C. CARTER FRED HIRSCHI L. R. AUTRY	HUGH MARONEY G. A. WATERS EARL FRENCH JOE NETTICK J. H. MILAM ED MORROW

#### Second Battalion

Major, A. A. Drummond First Lieutenant and Battalion Adjutant, Will T. Payne Second Lieutenant and Battalion Quartermaster and Commissary, F. F. Foster.

	Company D	COMPANY E	COMPANY F
Captain	L. R. Jones	C. C. KNOBLOCK	R. V. McBride
First Lieutenants	L. E. WOODWORTH	E. L. SPENCER	B. O. SIMANK
Second Lieutenants	W. B. ELKINS	JOE MITCHELL	KEITH FELLOWS
First Sergeants	E. A. Kissick	Myron Andrews	P. H. LOWERY
Sergeants	M. G. HARNDEN P. G. SCRUGGS RAY FREEMAN G. G. HAYS	CLAUDE HENSON J. H. SCOTT ALDEN LOOMIS J. T. TINGLE	W. L. IKARD H. C. BOYD GUY REID
Cerporals	JOHN BAKER A. P. BRODELL JOE WALTERS GUY POSTELLE J. R. THOMAS	JOE NELSON A. W. PARSONS HARRY NIMS C. C. SULLIVAN RAY HULL R. W. COZAD	D. F. COOLEY J. W. HINKEL F. L. JONES I. A. NELSON J. A. FROST C. M. POOL

#### Third Battalion

MAJOR, C. R. SMITH
FIRST LIEUTENANT AND BATTALION ADJUTANT, I. H. NEEDHAM
SECOND LIEUTENANT AND BATTALION QUARTERMASTER AND COMMISSARY, PAUL ORR

	COMPANY G	COMPANY H	COMPANY I
Captain	A. O. HESTON	OSCAR ABERNATHY	T. FRIEDEMANN
First Lieutenants	C. C. COBB	SHANNON KELLEY	LLOYD MARX
Second Lieutenants	GEORGE DAVIS	E. R. Cass J. E. Young	Н. Е. Доту
First Sergeants	GUY REID	О. С. Воур	A. E. OLDHAM
Sergeants	ROY HORE E. E. HORTON GLEN BRIGGS H. R. NAYLOR	H. E. JOHNSON HARRY WIGGS CHAS. BAUMAN VIRGIL CALDWELL	W. C. GRAY C. P. WHEELER E. O. CARTER GEO. WHITTENBERG
Corporals	L. WYANT N. M. MINOR R. L. ANDERSON L. V. SURTEES	W. C. WEAVER J. W. ELKINS GEORGE RANSOM J. L. CARTER JAMES SCRIVENER	J. A. FROST CHARLES KILPATRICK R. N. MATHEWS I. A. NELSON

# Best Drilled Company in the Regiment

Best drilled company in the regiment for the College year, 1913-14:

Company "A".

Captain L. D. HUFFMAN.

First Lieutenant JAMES S. CONNELL.

Second Lieutenant E. W. SIMANK.

First Sergeant GUY MANTLE.

Captain L. D. Huffman was presented with a special saber by the College as a reward for his excellent work in the Military Department during the College year, 1913-14.

The names of all the company officers of the best drilled company and the company letter have been engraved on a silver band and placed on the staff of the College flag.

#### Rifle Club

President, RAY B. BARR, Captain, JOHN J. GETGEY. Secretary and Treasurer, B. W. WATSON.

The indoor rifle team was composed of the following students:

Names.	Average for Year.
Barr, R. B.	185 1-11
Granberry, C. E.	185
Getgey, J. J.	182 7-11
Huffman, L. D.	182 4-11
Watson, B. W	182 2-11
Hill, R. B.	181 3-11
Reeves, A. R.	180 6-11
Graham, D. S.	177 3-11
Williams, Armon	177
Hardy, A. W	174 2-11
McLelland, Wm	173 9-11
Campbell, M. B.	170 2-11

The outdoor rifle team was composed of the following students:

Names.	Score for Match.
Hill, R. R.	134
Reeves, A. R.	132
Barr, R. B.	129
Granberry, C. E	129
Getgey, J. J.	124
Huffman, L. D.	122

Silver medals are presented by the National Rifle Association of America to those students who qualify in different kinds of firing.

#### **EXTENSION DIVISION**

The Extension Division of the A. and M. College embraces all of its activities for the instruction of people who are not resident at the College. All persons who are pursuing courses given at the College covering more than two weeks are considered residents. The A. and M. College is doing all that it can to extend its usefulness to all the people of the State as far as possible.

The general plan of Extension work contemplates first, a County Agent in every county in the State working full time, assisted by a Woman Agent for women and girls' work working not less than nine or ten months per year.

The County Agent will conduct Farm Demonstration Work, Farmers' Institutes, Boys' and Girls' Club Work, and have general charge in his county of the Agricultural Extension Work of the A. and M. College and the United States Department of Agriculture.

The Woman Agent will have special charge of Demonstrations in Domestic Science and Home Economics, Girls' Club Work and Club Work for Women, and be the representative in her county of the A. and M. College and the United States Department of Agriculture in all lines of Extension Work for women and girls.

The County Agents will be under the special supervision of District Agents who will visit them regularly and assist them in all matters pertaining to their duties.

Specialists from the College, the Experiment Station and the United States Department of Agriculture and elsewhere will assist the county agents under direction of the Extension Division as much as possible.

A Specialist in Hog Cholera Eradication Work and another in Pig Club Work from the United States Bureau of Animal In-

dustry has been secured by the Extension Division to assist the County Agents in these lines of work. We hope to secure still others for other lines.

A Specialist in Rural Sanitation has been employed to devote full time in cooperation with the County Agents in efforts to teach the laws of health and better sanitation.

Boys' and Girls' Clubs. For the crop year of 1915 there will be the following clubs: Corn, Kafir (including Feterita, Milo and all the grain sorghums), Cotton, Pig, Canning, Poultry and Better Bread. Write Extension Division for additional information.

Fairs.—Special work will be done to encourage and help in the holding of Community and County Fairs all leading up to exhibits of agricultural products at the State Fairs. A school at the State Fair for club prize winners will be held. Several \$160.00 Scholarships in the A. and M. College and numerous lesser prizes will be awarded in the various club contests. Write for special information.

Movable Schools.—A corps of from three to five lecturers from the College will conduct a school for one week in each county for farmers and their families, somewhat along the Farmers' Institute plan. The points in the county and the time spent at each point as well as all other local details will be arranged by the County Agents.

As provided by special legislative enactment the work of the Department of Agriculture for Schools will be conducted as heretofore. This work has to do with the teaching of Agriculture and Domestic Science in the common schools of the State. Teachers and County Superintendents of Schools should avail themselves of the help and cooperation of this department.

The total number of meetings attended during the year by all Extension workers at which addresses were made on some phase of the work was 12,279, with a total attendance of 155,355. Total number of miles traveled by rail was 229,711; by other conveyance 115,000. Total number of visits made to farmers and others in the interest of the work was 23,022. Total number of farmers enrolled as demonstrators and cooperators was 2,484.

Total number of Boys' and Girls' Club members enrolled by the A. and M. College was 20,500; by the Farmers' Cooperative Demonstration Work 6,398.

To cover all the various activities of the Extension workers of the A. and M. College and the United States Department of Agriculture during 1914 would take too much space. It is sufficient to say that more or less work was done on nearly every problem that affects the wellbeing of the farmers and their families, from the economic production of farm products to saving of human life by making successful war on typhoid fever.

#### Union of Federal and State Work

In July, 1914, the State Board of Agriculture, to comply with suggestions from the United States Department of Agriculture relative to meeting the requirements of the Smith-Lever Law, abolished the position of Dean of Extension Work at the A. and M. College and created the position of Director of Extension; and to further harmonize and make more effective the Agricultural Extension Work, being done in Oklahoma by the A. and M. College and Farmers' Cooperative Demonstration Work, on July 25 the State Agent of the Farmers' Cooperative Demonstration Work was elected to the position of Director of Extension of the A. and M. College.

# Hog Cholera and Cattle Tick Eradication Work

An active campaign for the eradication of hog cholera was carried on. All of the agents, except a few of the new ones, have learned to vaccinate both hogs and cattle, and have secured sets of instruments of their own with which to do the work.

During the year the county agents have vaccinated a total of 20,272 hogs. The serum-alone treatment was administered to 11,157, and the double or simultaneous treatment was administered to 9,115 hogs. The agents report that a total of 439 hogs died with cholera after treatment, or 2.2% of those vaccinated. This percentage of loss is very low. However, a large percent of the hogs were not infected when vaccinated, and more than half received the single treatment only. This and the fact that the agents all insisted on the adoption of preventative measures ac-

counts for the very low percent of loss. Agents report a total of fifty special hog cholera meetings with an attendance of 1,813 farmers. The agents report the purchase in their respective territories by farmers and others of 122 sets of instruments for vaccinating hogs, and eighty-seven sets of instruments for the vaccination of cattle for blackleg. The agents report having vaccinated 11,582 cattle for blackleg and the building of 138 dipping vats in their respective counties. They assisted the Bureau of Animal Industry agents in the holding of forty-seven special tickeradication meetings with a total attendance of 2,748 people.

#### Farmers' Clubs

During the year the county agents have assisted in the organization of 180 Farmers' Clubs or Associations for community improvement and cooperation with a total membership of 5,526.

# Road Improvement Work

All the county agents assisted more or less in road improvement work. They report attending and assisting in 118 special road improvement meetings with an attendance of 7,916 people. They report the grading and improving of a total of 1,966 miles of road in their respective counties.

# Names and Addresses of Extension Office and Field Force

W. D. Bentley, Director of Extension and State Agent, Stillwater, Oklahoma.

Jas. A. Wilson, Assistant Director of Extension and State Agent, Stillwater, Oklahoma.

John E. Swaim, Assistant State Agent in charge of Boys' Club Work, Stillwater, Oklahoma.

H. R. Hedger, Assistant Boys' Club Work, Stillwater, Oklahoma.

Emma A. Chandler, Assistant State Agent in charge Women's and Girls' Work, Stillwater, Oklahoma.

Dr. D. B. Tucker, Specialist in Rural Hygiene and Sanitation, Stillwater, Oklahoma.

George Wilson, Chair of Agriculture for Schools, Stillwater, Oklahoma.

D. C. Mooring, Principal of Short Courses, Stillwater, Oklahoma.

Miss Lethe Morrow, bookkeeper, Stillwater, Oklahoma

I. B. Sherman, stenographer, Stillwater, Oklahoma.

Miss Ruth Sharp, stenographer, Stillwater, Oklahoma.

Miss Ruth White, stenographer, Stillwater, Oklahoma.

Miss Minnie McCoy, stenographer, Stillwater, Oklahoma.

J. M. Daily, District Agent, Muskogee, Oklahoma, has supervision of the following agents:

R. C. Blocker, Idabel, McCurtain county.

Eugene Dickerson, Nowata, Nowata county.

L. H. Fash, Durant, Bryan county.

L. H. Fash, Durant, Bryan county.
R. T. Hemphill, Stigler, Haskell county.
J. L. Howe, Atoka, Atoka county.
S. L. Jeffords, Muskogee, Muskogee county.
D. F. Krause, Wilburton, Latimer county.
B. T. Lawson, Coweta, Wagoner county.
J. E. McClure, Poteau, Le Flore county.
T. H. Moore, Tahlequah, Cherokee county.
O. T. Pogue, Miami, Ottawa county.
A. A. Powell, Bartlesville, Washington county.
F. L. Rounsevell, Checotah, McIntosh county.
E. B. Shotwell, Okmulgee, Okmulgee county.
H. L. Stites, Pryor, Mayes county.
G. E. Thomas, Vinita, Craig county.
G. W. Vincent, Claremore, Rogers county.
J. M. White, McAlester, Pittsburg county.
H. M. Wolverton, Sallisaw, Sequoyah county.

H. M. Wolverton, Sallisaw, Sequoyah county.

F. F. Ferguson, District Agent, Minco, Oklahoma, has supervision of the following agents:

W. A. Conner, Frederick, Tillman county. O. C. Cooper, Chickasha, Grady county Ben Crawford, Altus, Jackson county. J. A. Donnelly, Elk City, Beckham county. Elmo Ellis, Ada, Pontotoc county. Hiram Garland, Madill, Marshall county. A. G. Graham, Marietta, Love county. S. B. Jackson, El Reno, Canadian county. S. B. Jackson, El Reno, Canadian county.
J. F. Foster, Mangum, Greer county.
James E. Lawrence, Norman, Cleveland county.
George R. Lea, Pauls Valley, Garvin county.
B. B. Mostellar, Anadarko, Caddo county.
J. F. Neely, Tishomingo, Johnston county.
F. F. Parker, Hobart, Kiowa county.
R. L. Scott, Ardmore, Carter county.
J. F. Stewart, Sulphus, Murray county.

W. B. Tucker, Duncan, Stephens county.
J. M. Vanderslice, Hollis, Harmon county.
W. T. Yoakum, Coalgate, Coal county.

C. A. McNabb, District Agent, 305 Federal Building, Oklahoma City, Oklahoma, has supervision of the following agents:

E. Belcher, Okemah, Okfuskee county.
B. F. Brown, Boley, Okfuskee county.
C. W. Callarman, Oklahoma City, Oklahoma county.
B. E. Drake, Sapulpa, Creek county.

Robert Dutcher, Newkirk, Kay county. C. E. Earnheart, Tulsa, Tulsa county. J. A. Farquharson, Guthrie, Logan county.

B. M. Jackson, Guymon, Panhandle. Clarence Roberts, Enid, Garfield county.

H. L. Lair, Wewoka, Seminole county.
S. E. Laird, Perry, Noble county.
B. E. Markland, Woodward, Woodward county.
M. T. Maudlin, Pawhuska, Osage county.

T. A. Milstead, Holdenville, Hughes county.

R. C. Moore, Shawnee, Pottawatomie county. J. M. Rapp, Watonga, Blaine county.

R. C. Shiflett, Kingfisher, Kingfisher county. D. C. Warren, Pawnee, Pawnee county. H. E. Wilson, Stillwater, Payne county.

Miss Emma A. Chandler has supervision of the following women agents:

Miss Iva M. Burch, Bartlesville, Washington county. Miss Anna L. Diehl, Okemah, Okfuskee county. Mrs. C. E. Earnheart, Tulsa, Tulsa county.

Mrs. Jennie Fash, Durant, Bryan county.

Mrs. B. M. Jackson, Guymon, Panhandle. Mrs. G. N. Kneeland, Enid, Garfield county.

Mrs. Virdie E. Moore, Shawnee, Pottawatomie county.
Mrs. R. A. Morse, Coalgate, Coal county.
Mrs. Mary V. Niblack, Ardmore, Carter county.
Mrs. Florence C. Owens, Atoka, Atoka county.

Mrs. Annie Peters (colored), Boley, Okfuskee county.

Mrs. Susan E. Pittman, Marietta, Love county.
Mrs. Mattie I. Royse, Elk City, Beckham county.
Mrs. Josie C. Sartain, Tahlequah, Cherokee county.
Miss Kate Smith, Guthrie, Logan county.

Mrs. Nancy C. Stewart, Sulphur, Murray county.

Mrs. L. B. Whitney, Perry, Noble county.

# THE AGRICULTURAL EXPERIMENT STATION

#### STATION STAFF

W. L. Carlyle, Director. L. L. Lewis, Veterinarian. C. E. Sanborn, Entomologist. Chas. K. Francis, Chemist.

N. O. Booth, Horticulturist.
W. L. Fowler, Animal Husbandman.
M. A. Beeson, Agronomist.
J. M. Fuller, Dairyman. B. A. Ahrens, Poultryman.

W. P. Shuler, Assistant Veterinarian. L. G. Herron, Assistant Horticulturist. C. G. Herion, Assistant Protections.
Ray H. Painter, Assistant Entomologist.
O. C. Smith, Assistant Chemist.
D. A. Spencer, Assistant Animal Husbandman.
R. E. Karper, Assistant Agronomist.

Adrian Daane, Assistant Agronomist.

Adran Daane, Assistant Agronomist.
C. A. Burns, Assistant Dairyman.
W. L. Blizzard, Assistant Animal Husbandman.
C. R. McElroy, Assistant Bacteriologist.
A. G. Weigel, Assistant Chemist.
M. J. Otey, Secretary.
Lula M. Tourtellotte, Executive Clerk.
Lulu Mitchell, Mailing Clerk.

The Experiment Station was established by provision of an Act of Congress approved March 2, 1887, commonly known as the Hatch Act, and entitled "An Act to establish Agricultural Experiment Stations in connection with Colleges established in the several States under the provision of an Act approved July 2, 1862, and of the acts supplementary thereto". Its objects are defined in the second section of the Act as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches, or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued in a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of different kinds of foods for domestic animals; the scientific and economic questions in the production of butter and cheese; and such researches or experiments bearing directly on the agricultural industry in the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories."

This act has been supplemented by the Adams Act, approved March 16, 1906, and which is designed to enlarge the scope and usefulness of these stations.

The Oklahoma Agricultural Experiment Station was located at the A. and M. College at Stillwater in July, 1891. In addition to the funds received from the two Federal appropriations above mentioned, which amounts to \$30,000 per annum, the State Board of Agriculture, as the Regents of the A. and M. College, has made liberal provision by appropriating funds from the legislative appropriations for the further maintenance and support of the Experiment Station.

The results obtained in the various lines of experiment work are published as bulletins. In addition to the regular bulletins giving the results of this work, a series of popular publications known as circulars are issued from time to time as conditions would seem to warrant to be used by the extension service in distributing valuable information to the farmers.

A mailing list is maintained which numbers at the present about 17,000 names, principally of farmers in various parts of the State. Any citizen of the State interested in agriculture may have the bulletins and other publications from the Station sent free on application to the Director of the Experiment Station asking to have his name placed upon the regular mailing list.

Such portions of the College farm, which comprises about 1,000 acres, as is needed for Experiment Station and research work is set aside for this purpose; also such livestock as is needed for feeding experiments is utilized by the Station men. All the scientific laboratories of the College are available for research work, and many of the scientific departments of the institution are interested in carrying on different projects under the supervision of the Experiment Station officers.

### ROLL OF STUDENTS

### REGISTER OF GRADUATE STUDENTS

Atkinson Mary B.	S.,	1906
Bowers, Chas. R. B.	S.,	1913Stillwater
Burke, ElizabethB.	S.,	1913Stillwater
Campbell, M. BB.	S.,	1914Minco
Campbell, ViolaB,	S.,	1913Guthrie
De Bord, George GB.	S.,	1914Stillwater
Friedemann, Wm. GB.	S.,	1914Stillwater
Graham, D. SB.	S.,	1914Stillwater
Harris Inez B.	S	1914 Stillwater
Harnden, E. E. B.	S.,	1912 Stillwater 1914 Coweta
Tackson, W. EB.	S.,	1914Coweta
Tames, HelenB.	S.,	1913Stillwater
Lahman, RuthB.	S.,	1914Stillwater
Lowry, EthelB.	S.,	1913Stillwater
McElrov, C. HB.	S.,	1906Stillwater
Merry, GeorgeB.	S.,	1913Stillwater
Webb. LeoneB,	S.,	1914Broken Arrow
Webb, Howard FB.	S.,	1914Broken Arrow

### REGISTER OF UNDERGRADUATE STUDENTS

### Senior Class

	5 7.1	G.114
Abernathy, Ora	Domestic Science and Art	Stillwater
Abernathy, Oscar	Science and Literature	Stillwater
Anderson, Paul K	Civil Engineering	Gotebo
Andrews, Maud	Domestic Science and Art	Okeene
Arabajian, H. K	Agriculture (Dairy)	Adana, Cilicia
		Asia Minor
	D 0.1	77
Bandel, Maude	Domestic Science and ArtTeachers' Normal	Ramona
Bass, Lillian	Teachers' Normal	Enid
Boyd, Nina	Teachers' Normal	Hooket
Boydston, Ethel	Domestic Science and Art	Caddo
Brandon, Edna	Domestic Science and Art	Stillwater
Brian, Naomi	Domestic Science and Art	Newkirk
Breidenthal, Hazel	Teachers' Normal	Stillwater
Brisby, Cassie	Domestic Science and Art. Teachers' Normal Domestic Science and Art. Teachers' Normal	Enid
Broemel, Agnes	Teachers' Normal	Stillwater
Browning, J. M	Agriculture (Agronomy)	Stillwater
Butler, Joe	Civil Engineering	Omega
Campbell, Rhea	Teachers' Normal	Guthrie
	Agriculture (Animal Husbandry)	
Choate, Geo. R	Agriculture (Animal Husbandry)	Indianola
Clemmer, H. J.	Agriculture (Agronomy)	Ponca City
Conn, Julian	Civil Engineering	McCurtain
Conner, Wm. A	Agriculture (Agronomy)	Stillwater
Crawford, G. L	Agriculture (Animal Husbandry)	Ashland, Miss.
Doty, Harold	Agriculture (Dairy)Agriculture (Animal Husbandry)	Stillwater
Drummond, A. A	Agriculture (Animal Husbandry)	Hominy
Edean E O	Agriculture (Animal Husbandry)	C+:11
Fleton W R	Mechanical Engineering	Shawner
Fellows, Keith	Civil Engineering	Stillwater
Fennema, Nick	Agriculture (Dairy)	Lawton
Finch, Laura	Domestic Science and Art	Chandler
Fisher, Anna	Domestic Science and Art	Arapaha
Fisher, John	Electrical Engineering	Arapaho
Forrester, Wirt E	Agriculture (Agronomy)	Stratford
Foster, F. F.	Agriculture (Animal Husbandry)	Perry
Friedemann, Theodore	Agriculture (Agronomy)Agriculture (Animal Husbandry)Science and Literature	Stillwater

Garrett E. L.	Teachers' Normal	Stillwater
Graham F. F.	Teachers' Normal	Marietta
Havenstrite R W	Agriculture (Animal Husbandry)	Lovell
Have Glenn G	Science and Literature	Glancoe
Hencon Ethel	Domestic Science and Art	Mol oud
Hoston Adrian O	Floatrical Engineering	Stillwator
Hist Cadio	Domestic Science and Art	Stillwater
Holton Dealine	Demostic Science and Art	L'olong
Holton, Pauline	Domestic Science and Art	Helena
fluddleson, I. F	Agriculture (Animal Husbandry) Science and Literature Domestic Science and Art Electrical Engineering Domestic Science and Art Domestic Science and Art Science and Literature	Kremini
Jablow, Mrs. Chas	Domestic Science and ArtTeachers' Normal	Stillwater
jacobs, Etnelyn	leacners Normal	Stillwater
Jones, L. R	Science and Literature	Blackwell
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Katz, Henrietta	Teachers' Normal	Sapulpa
Kenyon, Lucille	Teachers' Normal	Kaw City
Kile. Eugene	Teachers' Normal	Cushing
Knoblock, Cecil C	Science and Literature	Stillwater
Kraemer, Marguerite	Teachers' Normal Teachers' Normal Teachers' Normal Science and Literature Teachers' Normal	Perry
	Electrical Engineering	
24 20 11 20 20	Agriculture (Animal Husbandry) Domestic Science and Art. Agriculture (Horticulture) Domestic Science and Art Electrical Engineering Domestic Science and Art Science and Literature Teachers' Normal Teachers' Normal Agriculture (Agronomy)	D 1 177
McBride, R. V	Agriculture (Animal Husbandry)	Bartlesville
Mannheimer, Ruth	Domestic Science and Art	Pawnee
Mantle. Guv	Agriculture (Horticulture)	Adair
Marsh. Corinne	Domestic Science and Art	Springfield, Mo.
Marx. Loyd S	Electrical Engineering	Pawnee
Maver, Sylvia	Domestic Science and Art	Chandler
Melton, Armon	Science and Literature	Stillwater
Mitchell. Joe	Teachers' Normal	Hickorv
Morrison, Virginia	Teachers' Normal	Stillwater
Mullen, Clyde W	Agriculture (Agronomy)	Lawton
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Needham, I. H.	Agriculture (Agronomy)	Oklahoma City
Oldham, Albert	Science and LiteratureScience and LiteratureScience and Literature	Stillwater
Olmstead, M. E.	Science and Literature	Marshall
Orr. Paul F	Science and Literature	Lawton
T)-44 337 TT	C: +1 T2 + + 1 .	01 1
Pavne Wm T	Science and Literature	Okeman Oklahoma City
Payne, Wm. T	Science and Literature	Oklahoma City
Payne, Wm. T Peck, H. L	Civil Engineering Science and Literature Electrical Engineering	Okeman Oklahoma City Stillwater
Payne, Wm. T	Science and Literature  Electrical Engineering	Okemah Oklahoma City Stillwater
Payne, Wm. T. Peck, H. L. Rapp, C. W.	Science and LiteratureElectrical Engineering	Oklahoma City Stillwater
Patterson, W. H. Payne, Wm. T. Peck, H. L. Rapp, C. W. Reeve, J. R. Reichman, Elizabeth	Science and Literature  Electrical Engineering  Agriculture (Horticulture)  Electrical Engineering  Science and Literature	Okeman Oklahoma City Stillwater Dewey
Patterson, W. H. Payne, Wm. T. Peck, H. L.  Rapp. C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mahal J.	Science and Literature  Science and Literature  Agriculture (Horticulture)  Electrical Engineering  Science and Literature	OkemanOklahoma CityStillwaterStillwaterStillwaterStillwater
Patterson, W. H. Payne, Wm. T. Peck, H. L.  Rapp. C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Reupelde F.	Science and Literature  Electrical Engineering  Agriculture (Horticulture)  Electrical Engineering  Science and Literature  Agriculture (Agreement)	Okeman CityOklahoma CityStillwaterDeweyStillwaterStillwater
Patterson, W. H. Pavne, Wm. T. Peck, H. L.  Rapp. C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds, F. S.	Science and Literature  Electrical Engineering  Agriculture (Horticulture)  Electrical Engineering  Science and Literature  Science and Literature  Agriculture (Agronomy)	Okeman CityOklahoma CityStillwaterDelweyStillwaterStillwaterStillwaterRuston, La.
Patterson, W. H. Payne, Wm. T. Peck, H. L.  Rapp, C. W. Reeve, J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds, F. S. Roberts Clarence.	Science and Literature Electrical Engineering  Agriculture (Horticulture) Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy)	OkemanOklahoma CityStillwaterStillwaterDeweyStillwaterStillwaterStillwaterRuston, LaLawton
Patterson, W. H. Pavne, W. M. Peck, H. L.  Rapp, C. W. Reeve, J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds, F. S. Roberts Clarence. Rose, Rollin M. Russell, Mannie.	Science and Literature  Electrical Engineering  Agriculture (Horticulture)  Electrical Engineering  Science and Literature  Agriculture (Agronomy)  Agriculture (Pairy)  Agriculture (Dairy)	Okeman CityOklahoma CityStillwaterDeweyStillwaterStillwaterStillwaterRuston, LaLawtonStillwater
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose, Rollin M. Russell, Mamie.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art	Stillwater Dewey Stillwater Stillwater Ruston, La, Lawton Stillwater Warner
Rapp. C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose. Rollin M. Russell, Mamie.  Schaefer, Paul. Scott, Wiley. Scott, Lzora Scruggs. P. G. Selph. Nina. Simank, Ben. Smith, A. Ray. Spear, May. Spear, Maud. Spencer. E. L. Stallings. Ida.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Domestic Science and Art  Electrical Engineering Agriculture (Horticulture) Science and Literature Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Agronomy) Domestic Science and Art Architectural Engineering	Stillwater Dewey Stillwater Stillwater Ruston, La. Lawton Stillwater Warner  Mountain View Carnegie Stillwater Geronimo Stillwater Fayetteville, Tex. Haskell Bismark, N. Dak. Bismark, N. Dak. Stillwater Morrilton, Ark.
Rapp. C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence. Rose. Rollin M. Russell, Mamie.  Schaefer, Paul. Scott, Wiley. Scott, Lzora Scruggs. P. G. Selph. Nina. Simank, Ben. Smith, A. Ray. Spear, May. Spear, Maud. Spencer. E. L. Stallings. Ida.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Domestic Science and Art  Electrical Engineering Agriculture (Horticulture) Science and Literature Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Agronomy) Domestic Science and Art Architectural Engineering	Stillwater Dewey Stillwater Stillwater Ruston, La. Lawton Stillwater Warner  Mountain View Carnegie Stillwater Geronimo Stillwater Fayetteville, Tex. Haskell Bismark, N. Dak. Bismark, N. Dak. Stillwater Morrilton, Ark.
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Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence Rose, Rollin M. Russell, Mamie.  Schaefer, Paul. Scott, Uzora. Scruggs. P. G. Selph. Nina. Simank, Ben. Smith, A. Ray. Spear, Maud. Spear, Maud. Spear, Maud. Taylor, Jatta. Taylor, Jatta. Taylor, Jatta. Taylor, Jinez. Thomas, J. R. Tice, Eula. Tingle, J. T. Turner, Homer.  Van Eaton, Marjorie. Venters, H. D.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Agriculture (Agronomy) Agriculture (Dairy)  Domestic Science and Art  Electrical Engineering Agriculture (Horticulture) Science and Literature Agriculture (Horticulture) Science and Literature Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Agronomy) Domestic Science and Art Architectural Engineering Agriculture (Agronomy) Domestic Science and Art Argiculture (Agronomy) Science and Literature Agriculture (Animal Husbandry) Science and Literature Agriculture (Agronomy) Science and Literature Science and Literature Science and Literature	Stillwater Dewey Stillwater Stillwater Ruston, La. Lawton Stillwater Warnet Mountain View Carnegie Stillwater Geronimo Stillwater Haskell Bismark, N. Dak Bismark, N. Dak Stillwater Morrilton, Ark Stillwater Stillwater Morrilton, Ark Stillwater Hollis Meridian, Miss Lawton Fort Cobb Bader, Ill.
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Rapp, C. W. Reeve. J. R. Reichman, Elizabeth. Reichman, Mabel L. Revnolds. F. S. Roberts Clarence Rose, Rollin M. Russell, Mamie.  Schaefer, Paul. Scott, Uzora. Scruggs. P. G. Selph. Nina. Simank, Ben. Smith, A. Ray. Spear, Maud. Spear, Maud. Spear, Maud. Taylor, Jatta. Taylor, Jatta. Taylor, Jatta. Taylor, Jinez. Thomas, J. R. Tice, Eula. Tingle, J. T. Turner, Homer.  Van Eaton, Marjorie. Venters, H. D.	Agriculture (Horticulture)  Electrical Engineering Science and Literature Agriculture (Agronomy) Agriculture (Dairy) Agriculture (Dairy) Domestic Science and Art  Electrical Engineering Agriculture (Horticulture) Science and Literature Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Animal Husbandry) Domestic Science and Art Architectural Engineering Agriculture (Agronomy) Domestic Science and Art Architectural Engineering Agriculture (Agronomy) Science and Art Agriculture (Agronomy) Science and Literature Agriculture (Animal Husbandry) Science and Literature Agriculture (Animal Husbandry) Agriculture (Dairy)	Stillwater Dewey Stillwater Stillwater Ruston, La. Lawton Stillwater Warnet Mountain View Carnegie Stillwater Geronimo Stillwater Haskell Bismark, N. Dak Bismark, N. Dak Stillwater Morrilton, Ark Stillwater Stillwater Morrilton, Ark Stillwater Hollis Meridian, Miss Lawton Fort Cobb Bader, Ill.

Weiner, Lawrence	Agriculture (Dairy)Teachers' NormalDomestic Science and ArtElectrical EngineeringAgriculture (Agronomy)	New York, N. Y.
Wilbourn, Verda	Teachers' Normal	Magnolia, Ark.
Williamson, Carrie	Domestic Science and Art	Stillwater
Woodworth I F	Agriculturg (Agronomy)	Parry
Woodworth, L. E	Agriculture (Agronomy)	I erry
Young, J. E	Mechanical Engineering	Stillwater
	Junior Class	
Adams, Kathryn	Domestic Science and Art	Tishomingo
Andrew, C. S.	Domestic Science and Art	Stillwater
Rauman Chas	Science and Literature	Ressia
Beck, Paul	Science and Literature	Hunter
Boyd, Oran C	Agriculture	Hooker
Briggs, Glenn	Agriculture	Carter
Brower Laura	Science and LiteratureScience and LiteratureAgricultureAgricultureBlectrical EngineeringDomestic Science and Art	Stillwater
Canfield, Jessie J	Science and Literature	Yale
Carpenter, Chas. L	Agriculture	Bridgeport
Corbin Bert O	Science and Literature	Stillwater
Davis, Geo. E	Electrical Engineering Domestic Science and Art Agriculture	Stillwater
Denton, Elizabeth	Domestic Science and Art	Newkirk
Denny, C. G	Agriculture	Stillwater
First Fern	Science and Literature	Stillwater
Francis, Dora H.	Science and Literature	Kingfisher
	Domestic Science and Art	
Harris, Motier	Science and Literature	Stillwater
Harvey, Ruth	Science and Literature	Pond Creek
Heilman, Paul L	Teachers' Normal	Wagonet
Henderson, Georgia	Teachers' Normal	Yale
Heston, Lucille	Teachers' Normal	Stillwater
Hilganhara I W	Science and Literature Science and Literature Civil Engineering Teachers' Normal Teachers' Normal Teachers' Normal Domestic Science and Art Teachers' Normal	Uklahoma City
Jackson, J. A	Civil Engineering	Henryetta
Kenworthy, Chester	Agriculture	Muskogee
Lauderdale Ruby	Science and Literature	Stillwater
Lewis, Henry S	Agriculture	Stillwater
Lewis, C. W	Agriculture Science and Literature Science and Literature Agriculture Electrical Engineering Agriculture Science and Literature	Wakita
Lowery, Philip	Agriculture	Loco
Lowry, Fern	Science and Literature	Stillwater
Marsh, W. R.	Mechanical Engineering	Waynoka
Mondy, Beulah	Domestic Science and Art	Stillwater
Navlor, Harold R	Agriculture	Hollister
Nelson, Vinita	Domestic Science and Art	Stillwater
Notson, F. Carl	Electrical Engineering	Wellston
Overstreet, Maggie	Domestic Science and Art	Cowlington
Pierson, Jas. W	Agriculture	Stillwater
Putman, John E	AgricultureAgriculture	Woodford
Radnish, Helen	Agriculture	Stillwater
Reid. Guy C	Architectural Engineering	Stillwater
Robinson, J. L.	Agriculture	Omega
Rogers, Bertha	Domestic Science and Art Agriculture Architectural Engineering Agriculture Agriculture	Pawhuska
Savage, O. M.	Agriculture	Blackwell
Scott, J. H.	Civil Engineering	Stillwater
Sexauer, Dorothy	Domestic Science and Art	Guthrie
Stanshury Anna	Science and Literature	Clinton Stillwater
Stout, C. G.	Agriculture  Civil Engineering  Domestic Science and Art  Domestic Science and Art  Science and Literature  Mechanical Engineering	Wellston
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Thomas, Olive B	Domestic Science and ArtStillwaterCommerce and Marketing StillwaterTeachers' Normal Pryor
Vance, Alfred	Mechanical EngineeringBlackwell
Wheeler, Birdie	Teachers' Normal Stillwater Agriculture Stillwater Electrical Engineering Stillwater Electrical Engineering Cashion

### Sophomore Class

Sophomore Class		
Abercrombie, Russell	AgricultureDomestic Science and Art	Cashion
Abercrombie, Leona	Domestic Science and Art	Cashion
Abernathy, Eunice	Teachers' Normal	Stillwater
Aycock, Thomas	Commerce and Marketing	Altus
D 1 T-1	Agriculture Agriculture Science and Literature Teachers' Normal Agriculture Teachers' Normal Agriculture Teachers' Normal Agriculture Veterinary Medicine Engineering Agriculture	C4*15
Baker, Joan	Agriculture	Stillwater
Bartmess Mildred	Science and Literature	Ramona
Bartlett. Alice	Teachers' Normal	Stillwater
Biggin, Dorothea	Teachers' Normal	Stillwater
Black, Jas. A	Agriculture	Oklahoma City
Blackburn, Joe T	Teachers' Normal	Nida
Bonar, Mollie	Teachers' Normal	Stillwater
Booth, John V	Agriculture	Milton
Boyd, Homer C	Engineering	Ctillwater
Brodell A P	Agriculture	Keystone
Brower, Maud	Demestic Science and Art	Stillwater
Brumbaugh, Norma	Domestic Science and Art	Broken Arrow
Bryant, Ray	Agriculture	Frederick
Buddrus, Edmund	Agriculture	Muskogee
Byrd, Bertie	Agriculture  Domestic Science and Art  Domestic Science and Art  Agriculture  Agriculture  Teachers' Normal	Fort Towson
Coldwell Virgil	Science and Literature	Ctillwater
Campbell Teff	Commerce and Marketing	Mangum
Carlson, Grace	Domestic Science and Art	Meno
Carlyle, Kathleen	Domestic Science and Art	Stillwater
Carter, J. Lee	Commerce and Marketing	Madill
Castile, E. L	Agriculture	Norman
Castle, Lois	Domestic Science and Art	Okemah
Cobb Cogil C	Engineering	Arapaha
Cobb Ruth C	Science and Literature	Pawnee
Cole, Pearl	Teachers' Normal	Cushing
Cook, Byron C	Agriculture	Oklahoma City
Colglazier, Ray	Agriculture	Stillwater
Cozad, R. W	Topchors' Normal	Gerty Marietta. Miss.
Cummings, Maxie	Science and Literature Commerce and Marketing Domestic Science and Art Domestic Science and Art Commerce and Marketing Agriculture Domestic Science and Art Agriculture Engineering Science and Literature Teachers' Normal Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Teachers' Normal	Marietta, Miss.
Denton, Esther	Domestic Science and Art	Newkirk
Denton, Mary	Domestic Science and Art	Newkirk
Dickson, Knowlton	Science and Literature	Walter
Dillon, Lucille	Teachers' Normal	Pawnee
Duer F F	Science and Literature Science and Literature Teachers' Normal Engineering	Rarstow Tev
Elliott, Ernest	Science and LiteratureDomestic Science and Art	Lexington
Evans, Ruth	Domestic Science and Art	Stillwater
Follows Tris	Teachers' Normal Demestic Science and Art Agriculture Domestic Science and Art Engineering Agriculture Agriculture Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art	Stillwater
Fellows Reeds R	Demestic Science and Art	Stillwater
Finnell Howard B	Agriculture	Hartshorne
Fisher, Florence	Domestic Science and Art	Arapaho
Forsyth, Fred	Engineering	Bushyhead
Forsyth, Andrew	Agriculture	Bushyhead
Freeman, Ray F	Agriculture	Guthrie
French Mattie	Domestic Science and Art	Stillwater
French Laura	Domestic Science and Art	Stillwater
Frost, John	Engineering	Oklahoma City
2		
Gay, Thurmon	Commerce and Marketing Engineering Teachers' Normal	Pawhuska
Gloeckner, G. L.	Tanahara' Narmal	Fayetteville, Tex.
Gorgon, Juna	I cachers Normal	Stillwater

Graham, Milton	Agriculture	Marietta
Gray, Ruth	.Teachers' Normal	Stillwater
Green, Wm. J	Agriculture Teachers' Normal Agriculture	Wakita
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Hale, Fannie		Olalaharar Cita
Hamill, Dwight	Agriculture	Stillwater
Harnden, M. G	Teachers' Normal	Stillwater
Harris, Chve	Teachers' Normal	Enid
Hatton Anna Lee	Domestic Science and Art	Webberg Falls
Harris Philip	Agriculture	Newkirk
Hoymas Winton	Agriculture	Fovil
Hearn R Neville	Teachers' Normal	McLean Tex
Helmer R. A	.Engineering	Helena
Hendrickson, Elmo	.Agriculture	Boynton
Henson, Claude	Agriculture	McLoud
Hewett, B. H.	.Teachers' Normal	Tyrone
Hildebrand, H. B	Engineering	Stillwater
Hill. Ruth	Doriestic Science and Art	Oklahoma City
Hinkel, J. W	Science and Literature	Stillwater
Hirschi, Fred	Engineering	Iowa Park, Tex.
Hitchcock, Edith	Teachers' Normal	Stillwater
Hitchcock, Ethel	Teachers' Normal	Stillwater
Heefer, Cecil	Domestic Science and Art	Stillwater
Hoke, Roy	Agriculture	Quay
Horton, Wayne	Agriculture  Teachers' Normal Commerce and Marketing Agriculture Teachers' Normal Domestic Science and Art Agriculture Teachers' Normal Domestic Science and Art Agriculture Teachers' Normal Engineering Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Teachers' Normal Engineering Donestic Science and Art Science and Literature Engineering Teachers' Normal Agriculture Agriculture Agriculture Agriculture Domestic Science and Art Engineering Teachers' Normal Agriculture	Mekusukey
Horton, E. E.	Agriculture	Heath Springs, S. C.
Houck, Kathleen	Domestic Science and Art	Stillwater
House, R. F.	Engineering	Bristow
Hughes, Pauline	Teachers' Normal	Stillwater
Hull, Roy	Agriculture	Stillwater
Hurst, J. B	. Agriculture	Jetterson
71 1 337 T	Veterinary Medicine	C1:1-1-1
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Jacob, Celia	Domestic Science and Art	Stillwater
James, Cornelia		Stillwater
Johns, Wm. L		Stillwater
Johnson, H. J.	Engineering	Helena
Johnson, H. E.	Commerce and Marketing	Tulsa
Jones, Fred	Domestic Science and Art Science and Literature Commerce and Marketing Engineering Commerce and Marketing Science and Literature	Stillwater
Vanna Casana	Agricultura	Dannia III
Vanna Day	Agriculture	Doorin Til
Kallar Wilher F	Science and Literature	Hartchorne
Kelly Carson	Science and Literature	Stillwater
Kenny Roy W	Science and Literature	Rischwell
Keys Alma	Teachers' Normal	Fort Towson
Kilnatrick Roy	Agriculture	Huntet
Kilnatrick Chas	Agriculture	Hunter
Kimbell Tames A	Engineering	Altus
Kissick E. A	Agriculture	Valen
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Lawrence, Harry E	Commerce and Marketing	Okeene Madill
Lawrence, Harry ELillard, Lois	Commerce and Marketing	Okeene Madill Dale
Lawrence, Harry ELillard, LoisLoomis, Alden	.Engineering .Commerce and Marketing	Okeene Madill Dale Wakita
Lawrence, Harry ELillard, LoisLoomis, AldenLowry, Keith	.Commerce and Marketing	Okeene Madill Dale Wakita Stillwater
Lawrence, Harry ELillard, LoisLoomis, AldenLowry, Keith	.Commerce and Marketing	Madill Dale Wakita Stillwater
Lawrence, Harry ELillard, LoisLoomis, AldenLowry, Keith	.Commerce and Marketing	Madill Dale Wakita Stillwater
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Lawrence, Harry ELillard, LoisLoomis, AldenLowry, Keith	.Commerce and Marketing	Madill Dale Wakita Stillwater
Lawrence, Harry E. Lillard, Lois. Loomis, Alden. Lowry, Keith.  McCarrell, Mrs V. McCollom, Walter W. McConnell, Marjorie. McElroy, C. E. McKee, Calvin. McTaggart, Ernest.	Commerce and Marketing Teachers' Normal Agriculture Engineering  Domestic Science and Art Science and Literature Teachers' Normal Engineering Engineering Commerce and Marketing	. Madill . Dale . Wakita . Wakita . Stillwater . Wanette . Lone Wolf . Stillwater . Pineland, Tex Cooperton . Stillwater
Lawrence, Harry E. Lillard, Lois. Loomis, Alden. Lowry, Keith.  McCarrell, Mrs V. McCollom, Walter W. McConnell, Marjorie. McElroy, C. E. McKee, Calvin. McTaggart, Ernest.	Commerce and Marketing Teachers' Normal Agriculture Engineering  Domestic Science and Art Science and Literature Teachers' Normal Engineering Engineering Commerce and Marketing	. Madill . Dale . Wakita . Wakita . Stillwater . Wanette . Lone Wolf . Stillwater . Pineland, Tex Cooperton . Stillwater
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Lawrence, Harry E. Lillard, Lois. Loomis, Alden. Lowry, Keith.  McCarrell, Mrs V. McCollom, Walter W. McConnell, Marjorie. McElroy, C. E. McKee, Calvin. McTaggart, Ernest.	Commerce and Marketing Teachers' Normal Agriculture Engineering  Domestic Science and Art Science and Literature Teachers' Normal Engineering Engineering Commerce and Marketing	. Madill . Dale . Wakita . Wakita . Stillwater . Wanette . Lone Wolf . Stillwater . Pineland, Tex Cooperton . Stillwater
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Lawrence, Harry E. Lillard, Lois. Loomis, Alden. Lowry, Keith.  McCarrell, Mrs V. McCollom, Walter W. McConnell, Marjorie. McElroy, C. E. McKee, Calvin. McTaggart, Ernest.	Commerce and Marketing Teachers' Normal Agriculture Engineering  Domestic Science and Art Science and Literature Teachers' Normal Engineering Engineering Commerce and Marketing	. Madill . Dale . Wakita . Wakita . Stillwater . Wanette . Lone Wolf . Stillwater . Pineland, Tex Cooperton . Stillwater
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Lawrence, Harry E. Lillard, Lois. Loomis, Alden. Lowry, Keith.  McCarrell, Mrs V. McCollom, Walter W. McConnell, Marjorie. McElroy, C. E. McKee, Calvin. McTaggart, Ernest.	.Commerce and Marketing	. Madill . Dale . Wakita . Wakita . Stillwater . Lone Wolf . Stillwater . Pineland, Tex Cooperton . Stillwater

Moorman, Helen	Domestic Science and Art Domestic Science and Art Veterinary Medicine Science and Literature Teachers' Normal Agriculture Domestic Science and Art Agriculture	Stillwater
Morgan, Vera	Domestic Science and Art	Stillwater
Morris, John W	Science and Literature	Harrah
Mowdy Ollie	Teachers' Normal	. Coalgate
Mover. Otto	Agriculture	Deer Creek
Muncie, Blanche	Domestic Science and Art	Byron
Murray, Clive	Agriculture	Nida
Nach Ryron	Engineering Domestic Science and Art Engineering Science and Literature Engineering Engineering	Paden
Neerman Katherine	Domestic Science and Art	Tulsa
Nelson, Joe S	Engineering	Stillwater
Nelson, I. A	Science and Literature	Stillwater
Netick, Joseph	Engineering	- Payson
Nims, Harry	Lngineering	Cusning
Oldham Rhodella	Domestic Science and Art	Stillwater
Outhier, Virgil	Domestic Science and Art	Homestead
Overstreet, Russell	Agriculture	Cowlington
Oxley, W. E	"Domestic Science and Art "Domestic Science and Art "Agriculture "Agriculture	Cleo
Painton Donothu	Domestic Science and Art Domestic Science and Art Engineering Teachers' Normal Engineering Commerce and Marketing Teachers' Normal	Caillanatan
Parker Gracie	Domestic Science and Art	StillWater Independence Kan
Parsons Alva	Engineering	Renfrow
Patterson, Allen I	Teachers' Normal	Newkirk
Phillips, J. B.	Engineering	Ardmore
Pickard, Jessie		Reed
Poole, Grace	Teachers' Normal	Stillwater
Powell, J. J.	Engineering	Cherokee
Danson Hann	Agriculture Domestic Science and Art Agriculture Science and Literature Commerce and Marketing Domestic Science and Art Domestic Science and Art	Danid Carala
Rang Jema	Domestic Science and Art	Pond Creek
Rinehart Virgil	Agriculture	Stillwater
Robinson, Wm. B	Science and Literature	Quaker City, Ohio,
Robinson, Chas, H	.Commerce and Marketing	Stillwater
Rose, Mayme	Domestic Science and Art	Glencoe
Russell, Margaret	Domestic Science and Art	Warner
C	A * 1/	3.6
Scrivener, Russell	- Agriculture	Maysville
Shiller H H	Engineering	Stillwater
Smith, C. Harold	Engineering	Spira
Smith, G. C.	Teachers' Normal	Prague
Smith, Maude A	Teachers' Normal	Cordell
Spain, Byron	Agriculture	Rocky
Spurrier, Kara	Domestic Science and Art	Stillwater
Stegelman, Verna	Domestic Science and Art	Oklahoma City
Surtees I V	Agriculture	Stillwater
Swone John G	Fngineering	Houston Tex
more, joint d	Agriculture  Engineering Engineering Engineering Teachers' Normal Agriculture Domestic Science and Art Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Engineering	Houston, Tex.
Thompson, Josephine	Domestic Science and ArtScience and Literature	Coyle
Upton, John F	Engineering	Mounds
Vaughan Frank	Agriculture Agriculture Teachers' Normal	Supply
Veach, Walter	Agriculture	Kiowa, Kans.
Vermillion, Rachel	Teachers' Normal	Stillwater
Wode A E	Agricultura	Douglas
Waltone Ioo	Agriculture	Douglas
Walters Paul	Agriculture	Broken Arrow
Walters, Georgia	Domestic Science and Art	Broken Arrow
Ware, Virgie	Domestic Science and Art	Stillwater
Warren, Lydia	Domestic Science and Art	Adair
Waters, George A	Agriculture	Pawnee
Weaver, W. C	Commerce and Marketing	Stillwater
Wheeler C P	Agriculture	Warner
Whillock Ruena	Teachers' Normal	Stillwater
Wiggs Harry	Engineering	Manford
Wiley, Bennie	Agriculture	Broken Arrow
Wilson, J. M	Engineering	Homestead
Wilson, O. G	Commerce and Marketing	Cherokee
Winn, Annaliza	Teachers' Normal Agriculture Agriculture Agriculture Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Agriculture Commerce and Marketing Agriculture Teachers' Normal Engineering Agriculture Engineering Commerce and Marketing Domestic Science and Art Engineering Teachers' Normal Engineering Teachers' Normal Engineering Agriculture Tengineering Teachers' Normal Engineering Agriculture Teachers' Normal Engineering	Sophia
Witte, Harold	-Engineering	- Shawnee
Woodson, Mortimer	Agriculture	Walter
Wright, Gertrude	reachers' Normal	Ulney
	Chivillectiffs	·· rairview

### Freshman Class

Abernathy, Zula	Science and Literature Engineering Agriculture Commerce and Marketing Agriculture Commerce and Marketing Science and Literature	Stillwater
Aherns, Raymond	Engineering	Frederick
Adcock, Orlan E	Agriculture	Ramona
Allison, Dave	Commerce and Marketing	Ralston
Anderson, Roy L	Agriculture	Stillwater
Appleget, Alan	Commerce and Marketing	Woodward
Autry, Chas	Science and Literature	Stillwater
Backes, Rose	Teachers' Normal	Watonga
Bandelier, George E	Engineering	Stillwater
Barnes Thomas	Science and Literature	Lipscomb, Tex.
Barnes Hazel L.	Domestic Science and Art	Banner
Barney Wm E	Engineering	Stillwater
Barr Robert	Engineering	Stillwater
Raugh Floyd	Science and Literature	Meeker
Reck Wm T	Agriculture	Huntet
Redford Vena	Science and Literature	Fort Towson
Barry Caril	Engineering	Chickacha
Perser Teo F	Engineering	Shadaa
Pilvon Flord	Commerce and Marketing	Stillwater
Plately Oddia	Science and Literature	Cotobo
Blakely, Oddie	E-since and Literature	Gotebo
Brazier, Warren	A minultum	Lawton
Bonar, Fred	Agriculture	Lovell
Boone, Lawrence D	Agriculture	Hardy
Braly, Byron B	Agriculture	Leonard, Tex.
Brazeel, J. P	Agriculture	Okinulgee
Breidenthal, Leslie	Engineering	Stillwater
Brown, Mary E	Teachers' Normal  Engineering Science and Literature Domestic Science and Art Engineering Engineering Science and Literature Agriculture Science and Literature Engineering Engineering Commerce and Marketing Science and Literature Engineering Commerce and Marketing Science and Literature Engineering Tommerce and Marketing Science and Literature Engineering Agriculture Agriculture Agriculture Engineering Teachers' Normal Science and Literature Domestic Science and Art Engineering Commerce and Marketing Agriculture Agriculture Agriculture Domestic Science and Art Engineering Commerce and Marketing Agriculture	Agra
Buchanan, Effie	Science and Literature	Morrison
Buffington, Edith	Domestic Science and Art	Stillwater
Burnham, Henry W	Engineering	Stillwater
Burns, Van	Commerce and Marketing	Cheyenne
Bussing, Albert C	Agriculture	Fountain
<u>.</u>	*	
Calloway, S. C	Agriculture	Duncan
Carlson, Floyd	Agriculture	Meno
Carlton, Oscar	Commerce and Marketing	McLoud
Carlyle Helen	Science and Literature	Stillwater
Carter Gorver C	Agriculture	Turley
Chase F I	Agriculture	Paleton
Chewning Gracie	Domestic Science and Art	Stillwater
Clausen Chester A	Agriculture	Stillwater
Clausen Ethel	Demostic Science and Aut	C4:114
Clay Hanry	Spinge and Literature	Nimmalsoh
Claughlan Haman	Colones and Literature	Ninnekan
Coffee Tales D	Commence and Literature	Kingling
Coliman, John B	Commerce and Marketing	Fort lowson
Coleman, Lester	Engineering	Ked Kock
Cooley, W. A	Agriculture	Bridgeport
Cooley, D. F	leachers Normal	Bridgeport
Crawford, Clyde W	Agriculture	Pecan Gap, Tex.
Crocker, Leo	Agriculture Agriculture Commerce and Marketing Science and Literature Agriculture Agriculture Domestic Science and Art Agriculture Domestic Science and Art Science and Literature Commerce and Literature Commerce and Marketing Engineering Agriculture Teachers' Normal Agriculture Agriculture	Purdy, Mo.
Dala Fantan	Engineering Science and Literature Domestic Science and Art Domestic Science and Art Engineering Domestic Science and Art Engineering Engineering Agriculture Science and Literature Agriculture	7 70 1 75
Davison Frod	Coiones and Lit	lowa Park, Tex.
Do Pond Flanouse	Demostic Coince and Literature	Snattuck
De Bord, Florence	Domestic Science and Art	Stillwater
De Bord, Grace	Domestic Science and Art	Stillwater
Dill, Glenn	Engineering	Okemah
Donahoo, Grace	Domestic Science and Art	Mangum
Dose, Herman	Engineering	Kiefer
Douglass, Glen	Engineering	Guthrie
Dunlavy, Henry	Agriculture	Stillwater
Durham, Fern	Science and Literature	Stillwater
Dunn, W. A	Agriculture	Wapanucka
France 1 C	C 135	
Eastwood, Carr	Commerce and Marketing	Boswell
Elkins, J. W	Science and Literature	Mountain View
Ellis, Arthur	Engineering	Oklahoma City
Elliott, Rufus	Engineering	Granite
Elwell, Rex	Agriculture	Stillwater
Emmons, Clarence	Commerce and MarketingScience and LiteratureEngineeringEngineeringAgricultureEngineering	Stillwater
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Fennema, Pete	∵riculture ∪omestic Science and Art Agriculture Agriculture Agriculture	Lawton
Ferguson, Audrey	Domestic Science and Art	Stillwater
Forrester, C. T.	Agriculture	Stratford
Forrester, H. E	Agriculture	Stratford
French, Earl	Agriculture	Stillwater

Garlock, Harry	AgricultureScience and LiteratureDomestic Science and ArtDomestic Science and Art	Vici
Germany, Chas. E	Science and Literature	Heavener
Gray, Julia	Domestic Science and Art	Мау
Gray, Mina	Domestic Science and Art	мау
Hanna, O'Lulu	Domestic Science and Art Engineering Domestic Science and Art Engineering Domestic Science and Art Commerce and Marketing Teachers' Normal Engineering Commerce and Marketing Engineering Engineering Agriculture Teachers' Normal Domestic Science and Art Domestic Science and Art	Bramer, Mo.
Hardy, Abbie	Engineering	Marshall
Harp, Juna	Domestic Science and Art	Stillwater
Harp, Norris, G	Engineering	Stillwater
Haston Clyde	Commerce and Marketing	Stillwater
Hatcher, Otto	Teachers' Normal	Frisco
Hays, George P	Engineering	Okarche
Hays, R. B.	Commerce and Marketing	Glencoe
Hendrix, Paul	Engineering	Sayre
Hilganharg Ralph	Agriculture	Stillwater
Hoggard Paul	Teachers' Normal	Hickory
Hopkins, Maud	Domestic Science and Art	Stillwater
Hopkins, Blanche	Domestic Science and Art	Stillwater
Hoskinson, Helen	Domestic Science and Art	Stillwater
Taraka Class	Teachana? Namuel	C+:11
Jacobs, Clare	Commerce and Marketing	Stillwater
Jenkins, Henry E	Engineering	Frederick
Johnson, Pearl	Teachers' Normal Commerce and Marketing Engineering Domestic Science and Art	Orlando
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Ketchum, John E	Commerce and MarketingEngineeringTeachers' NormalAgricultureCommerce and MarketingDomestic Science and ArtAgriculture	Foraker
Knight Lillian	Tasahara' Normal	McLean, Tex.
Koch Herman	Agriculture	Ressie
Kramp, W. C.	Commerce and Marketing	Okeene
Krone, Jessie	Domestic Science and Art	Sparks
Kutis, Frank	Agriculture	Edmond
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Lavaggi, Eugene	Engineering	West Hoboken, N. J.
Leglia Lawie F	Science and Literature	Vici
Lilley Lenna	Domestic Science and Art	Cushing
Long, Amy	Agriculture Engineering Science and Literature Domestic Science and Art Teachers' Normal	Chandler
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McBride, Margaret	Teachers Normal	Gearv
	Engineening	Danasa
McNeely Oscar	Engineering Engineering	Byars
McNeely, Oscar	Teachers' Normal Engineering Engineering	Byars Goltry
McNeely, Oscar	Engineering Engineering Science and Literature	Byars Goltry Stillwater
McNeely, Oscar	Engineering Engineering Science and Literature Science and Literature	Byars Goltry Stillwater Stillwater
McNeely, Oscar	Engineering Engineering Science and Literature Science and Literature Engineering	Byars Goltry Stillwater Stillwater Stillwater
McNeely, Oscar	Engineering Science and Literature Science and Literature Engineering Domestic Science and Art	ByarsGoltryStillwaterStillwaterStillwaterStillwater
McNeely, Oscar	Engineering  Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater
McNeely, Oscar  Mahaffey, Nellie. Mahaffey, K. W. Mahaffey, Max M Markwell, Nettie. Markwell, Ethel. Markwell, Hazel. Marow, Hugh	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater
McNeely, Oscar  Mahaffey, Nellie	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga
McNeely, Oscar.  Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie Markwell, Ethel Markwell, Hazel Maroney, Hugh Marton, A. O. Mathews, Richard.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature	Byars Goltry Stillwater Watonga Stillwater
McNeely, Oscar.  Mahaffey, Nellie. Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie Markwell, Ethel. Markwell, Hazel. Maroney, Hugh. Marton, A. O. Mathews, Richard. Metcalf, Julia	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hoboart
McNeely, Oscar  Mahaffey, Nellie. Mahaffey, K. W. Mahaffey, Max M Markwell, Nettie. Markwell, Ethel Markwell, Hazel. Maroney, Hugh Marton, A. O. Mathews, Richard Metcalf, Julia. Miller, Josephine.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art	Byars Goltry Stillwater Hobart Tulsa
McNeely, Oscar.  Mahaffey, K. W. Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie Markwell, Ethel Markwell, Hazel Maroney, Hugh Marton, A. O. Mathews, Richard. Metcalf, Julia. Miller, Josephine. Miller, Fern. Miller, Harry Loby.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Hobart Tulsa Tulsa
McNeely, Oscar  Mahaffey, Nellie. Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie Markwell, Ethel. Markwell, Hazel. Maroney, Hugh. Marton, A. O. Mathews, Richard. Metcalf, Julia. Miller, Josephine. Miller, Fern. Miller, Fern. Miller, Henry John. Mirchell Gail V.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Engineering	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Enid
McNeely, Oscar  Mahaffey, Nellie. Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie. Markwell, Ethel. Markwell, Hazel. Maron, A. O. Mathews, Richard. Metcalf, Julia. Miller, Josephine. Miller, Fern. Miller, Henry John. Mitchell, Gail V. Morgan, Mary.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art	Byars Goltry Stillwater Hobart Tulsa El Reno Glencoe
McNeely, Oscar.  Mahaffey, K. W. Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie Markwell, Ethel. Markwell, Hazel Maroney, Hugh Mathews, Richard. Metcalf, Julia. Miller, Josephine Miller, Fern Miller, Henry John. Mitchell, Gail V. Morrow, J. R.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Commerce Science and Art Commerce and Marketing	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Enid El Reno Glencoe Harrah
McNeely, Oscar.  Mahaffey, Nellie. Mahaffey, K. W. Mahaffey, Max M. Markwell, Nettie Markwell, Ethel Markwell, Hazel Maroney, Hugh. Marton, A. O. Mathews, Richard. Metcalf, Julia. Miller, Josephine. Miller, Fern. Miller, Fern. Miller, Fern. Miller, Gail V. Morgan, Mary. Morrow, J. R. Murphy, Henry.	Engineering Engineering Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce and Literature Domestic Science and Art Agriculture Commerce and Art Commerce and Marketing Agriculture	Byars Goltry Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Commerce Science and Art Agriculture Engineering Domestic Science and Art Commerce and Marketing Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Commerce Science and Art Agriculture Engineering Domestic Science and Art Commerce and Marketing Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Commerce Science and Art Agriculture Engineering Domestic Science and Art Commerce and Marketing Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater
Mahaffey, Nellie	Science and Literature Science and Literature Engineering Domestic Science and Art Domestic Science and Art Teachers' Normal Science and Literature Teachers' Normal Science and Literature Domestic Science and Art Domestic Science and Art Domestic Science and Art Domestic Science and Art Commerce and Marketing Agriculture Commerce and Marketing Science and Literature Agriculture	Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Watonga Stillwater Hobart Tulsa Tulsa Enid El Reno Glencoe Harrah Glencoe Stillwater Bernice Stillwater

Powell, Franklin	Agriculture Agriculture Agriculture	Stillwater
Putman, O. L.	Agriculture	Woodford
Putney, Elmer	Agriculture	Oklahoma City
	Engineering Agriculture Commerce and Marketing Commerce and Marketing Science and Literature Agriculture Domestic Science and Art Science and Literature Domestic Science and Art Engineering Agriculture	
Ranes, G. O	Engineering	Lawton
Reed, Otis C	Agriculture	Washington
Rennie, A. M.	Commerce and Marketing	Pauls Valley
Rennie, M. A.	Commerce and Marketing	Pauls Valley
Reichman, Ida	Agriculture Literature	Stillwater
Poheiron Clara	Domostic Science and Art	Puchuhand
Robinson Jessie Mae	Science and Literature	Rokchita
Rogers Ressie	Domestic Science and Art	Stillwater
Ross George	Engineering	Shawnes
Roy. Percy	Agriculture	Hillsdale
2003, 2003		IIIIIbaaro
Scales, Joseph A	EngineeringDomestic Science and Art	Webbers Falls
Schnurr, Angie	Domestic Science and Art	Orlando
Scott, Frances	Science and Literature	Stillwater
Scroggs, Arthur	Commerce and Marketing	Stillwater
Selph, Layla	Domestic Science and Art	Stillwater
Shepherd, Clara	Teachers' Normal	Seminole
Shepherd, Ruth	Domestic Science and Art Science and Literature Commerce and Marketing Domestic Science and Art Teachers' Normal Domestic Science and Art Engineering Teachers' Normal Commerce and Marketing	Stillwater
Shirley, Emory	Engineering	Gage
Smith, Lelia	leachers' Normal	Stillwater
Smith, Bennie	Commerce and Marketing Engineering Commerce and Marketing Domestic Science and Art Engineering Engineering Teachers' Normal Engineering Science and Literature Engineering Engineering	Kaw City
Southwick, Ivan A	Engineering	Garber
Stanley, Chas. J	Commerce and Marketing	VV 1Ster
Statisbury, Floy	Domestic Science and Art	Stillwater
Stavord Fldridge	Engineering	Anadarko
Stinson C F	Tanhare' Normal	Comprehe
Stone Shelley R	Engineering	Chiekasha
Stringer Grady	Science and Literature	Ochelata
Swim. Leslie	Engineering	Stillwater
Swim, Paul M.	Engineering	Stillwater
		Dilli water
Thomas, Martha	Domestic Science and Art	Stillwater
Thomas, Walter H	Commerce and Marketing	Gage
Thompson, Ferral	Commerce and Marketing	Stillwater
Tillinghast, Harold	Engineering	El Reno
Tilton, Albert	Teachers' Normal	Nardin
Tilton, Barbara H	Teachers' Normal	Nardin
Trekell, Edna	Domestic Science and Art	Stillwater
lucker, Chas. M	Domestic Science and Art Commerce and Marketing Commerce and Marketing Engineering Teachers' Normal Teachers' Normal Domestic Science and Art Engineering	Stillwater
	Domestic Science and Art	
vernimon, Ruth	Domestic Science and Art	Stillwater
Wallace Bob	Engineering	Wananucka
Wallace Gerald	Engineering Agriculture Engineering	Stillwater
Walker, Morgan N	Engineering	Fleetwood
Watson, Glenn	Engineering	Stillwater
Watson, Warren	Engineering	Stillwater
Watson, Bernal A	Engineering Engineering Engineering Engineering Engineering Engineering Domestic Science and Art	Stillwater
Webb, Robt. T	Engineering	Leedy
Webb, Nix	Engineering	Tipton
Wheeler, Pearl	Domestic Science and Art	Stillwater
	Science and Literature	Stillwater
Whipple, John		
VV hippie, John	Engineering	Stillwater
vy hippie, john	Engineering Engineering	Stillwater Stillwater
vy hippie, john	Engineering Engineering Engineering	Stillwater Stillwater Guthrie
vy hippie, john	Engineering Engineering Engineering Engineering Science and Literature	Stillwater Stillwater Guthrie Stillwater
VV hippie, John	Engineering Engineering Engineering Science and Literature Science and Literature	Stillwater Stillwater Guthrie Stillwater Sparks
vy hippie, john	Engineering Engineering Engineering Science and Literature Science and Literature Teachers' Normal	Stillwater Stillwater Guthrie Stillwater Sparks Stillwater
vy hippie, john	Engineering Engineering Engineering Science and Literature Science and Literature Teachers' Normal Engineering	Stillwater Stillwater Guthrie Stillwater Sparks Stillwater Medford
vy hippie, john	Engineering Engineering Engineering Science and Literature Science and Literature Teachers' Normal Engineering Engineering	Stillwater Stillwater Guthrie Stillwater Sparks Stillwater Medford Tulsa
vy hippie, john	Engineering Engineering Engineering Science and Literature Science and Literature Teachers' Normal Engineering Engineering Engineering	Stillwater Stillwater Guthrie Stillwater Sparks Stillwater Medford Tulsa Cashion

### Engineering Preparatory Class

Beaty, Bryan, Oklahoma City Brattain, Wm., Capron French, Preston, Supply Johnson, Cedric, Lawton

Larner, Ray, Dill

Bowen, Howard E., Sayre Bruner, Joseph J., Chickasha Fuehner, Rudolph, Oklahoma City Keller, Harold, Davenport Lowry, Garvin, Sayre McKinnon, John J., Eddy

Pierson, Roy, Pond Creek

Sharp, Chas., Sulphur Smith, Arthur Lee, Edmond

Tribbey, Roy Jack, Maud

Owsley, Lindsey, Stillwater

Russell, Joe, Ballard

Spaugler, Irl, Drumright

Upton, C. R., Mounds

### Sub-Freshman Class

Abbott, Beverly, Niles Abbott, Glenn, Niles Anderson, John M., Ardmore

Ball, Oscar, Sparks
Baugh, Harold, Meeker
Backes, Louise, Watonga
Bauman, August, Bessie
Baumle, Marcedees, Shawnee
Bellis, Chas, Stillwater
Bever, Hazel, Skedee
Biggin, Mabel, Stillwater
Bishop, John L., Stillwater
Black, Tom Allen, Pauls Valley
Bond, Green M., Oklahoma City
Boston, Arthur, Hanna

Caldwell, Lenore, Stillwater Caldwell, Nita, Stillwater Camp, Melvin, Cleo Springs Canfield, Ralph, Yale Carlson, Alice, Meno Carpenter, Edw., Bridgeport Carter, Zaida, Stillwater Cash, Murrill, Temple Causey, Ruby, Stillwater Chapman, Dewey, Stillwater

Damon, Geo. M., Ringwood Danenhauer, Frank, Lehigh Darlow, A. E., Stillwater Darlow, Anna, Stillwater Dawson, Hal Geo., Stuart

Eckerson, Earl, Great Bend, Kans. Ferguson, Ross, Glencoe Fielding, Vernon, Sulphur Files, James, Ralston Files, Walter, Albion Fding, Frank, Hugo

Garrett, Raymond, Ardmore Gillmore, Blanche, Lone Wolf Goold, Christine, Glencoe

Hale, C. V., Sapulpa
Harkleroad, J. C., Ponca City
Harrison, R. B., Kenefic
Hartshome, E. D., Stillwater
Hatch, T. J., Enid
Hatch, W. R., Enid
Hauser, Granville, Quay
Hay, Edith, Orlando
Held, Clara Hope, Stillwater
Hennin, A. Hugh, Gage
Heusel, C. A., Saltfork
Hesser, I. T., Glencoe
Hilton, Nellie, Briartown

Inman, Maye, Bristow Isenberg, Olieva, Stillwater

Jacob, George, Stillwater Johnson, Claude, Okemah Johnson, Geo. A., Chicago, Ill.

Keeton, Victor D., Ralston E.em. L. B., Pauls Valley Eilpatrick, Claude, Hunter Armstrong, Chas., Meno Atkinson, Ray, Great Bend, Kans. Arnold, T. M., Beggs,

Boone, Velma, Hardy
Bosserman, Ruth, Frankfort, Ind.
Boydston, Roy G., Elk City
Boydston, Calvin, Elk City
Bradford, Leslie, Pottsville, Ark.
Brenningerm, Esther, Orlando
Brewer, J. C., Stillwater
Brower, Belle, Stillwater
Bryan, Kenneth, Stillwater
Bryce, Jas. F., Stillwater
Burnham, Alice, Stillwater
Byrne, Cassius, Ardmore

Chase, Ward, Ralston Cheuvrout, Carlin, Jones Cloud, J. W., Meno Clump, T. D., Kingfisher Colglazier, Ada, Stillwater Crawley, E. H., Hooker Crawford, Lee, Blake Cummins, Ina, Stillwater Curtis, Bonnie, Newkirk

Davis, A. H., Enid Diggs, Samuel, Stillwater Dolphin, Philip, Stillwater Doty, Lillie L., Stillwater Dye, Jessie, Stillwater

Forrester, Nellie, Stratford Forrester, Willie, Stratford Franklin, Leona, Grimes Franklin, Chester, Grimes Friedemann, Otto, Stillwater Frier, Goul, Sulphur

Grooms, Otis, Glencoe Green, E. B., Cestos

Hinecker, Embri, Ralston
Hogle, Ellen, Stillwater
Hoke, Jesse, Quay
Holmes, Neta, Stillwater
Hostetter, Eston, Calumet
Houston, Chesney, Stillwater
Houston, H. Mortimer, Edmond
Howard, Emily, Glencoe
Hubbard, John, Keystone
Hudson, Anna B., Terlton
Hugls, Grace, Glencoe
Hunt, John, Merrick

Ivenberg, Verna, Stillwater Ives, Herbert, Avery

Johnson, Fern Hope, Orlando Jones, Howard, S, Reed Jones, Cecil G., Ames

Kilpatrick, Maude, Hunter Knight, Eugene, Stillwater LaBohn, Henry, Oklahoma City Lanham, Earl, Stratford Laughlin, Mary, Stillwater Laughlin, Evert, Stillwater Leach, Florence, Stillwater Lefore, Thomas, Jackson Lewis, W. A., Wynnewood

McBride, Mary, Geary
McClellan, Herbert, Norman
McColgan, Loretta, Stillwater
McConkly, Leslie, Ripley
Main, Francis E., Vinco
Mason, Raymond, Shawnee
May, Roy, Scullin
Mantle, Iva, Adair
Markwell, Earl, Stillwater

Nation, Jno., Quinton Nelson, Inor, Stillwater Netick, Geo.. Payson Netherton, R. S., Bernice

Odor, Hesper, Arcadia

Page, Edward, Poteau Page, Will B., Poteau Penny, J. H., Glencoe Perry, Burley, Cushing Percival, Kathryn, Bay City, Tex.

Rardon, Glenn, Oklahoma City Ray, Thomas W., Stillwater Ray, Marian, Stillwater Reichman, Carl, Stillwater Richardson, Blanche, Stillwater

Salisbury, Ira D., Oklahoma City Savage, Claud, Hartshorne Schooler, George, Glencoe Schnorrenberg, F. B., Altus Scivally, Bernice, Ardmore Scott, Christian, Meno Scroggs, Ada, Stillwater Scroggs, Wm., Stillwater Sewell, P. E., Stillwater Sewell, P. E., Stillwater Shaw, Russell, Vanoss Sharp, Ola, Chandler Shields, Wm., Calumet Simmons, Cloyd, Sayre Skinner, Ray, Billings Smith, Willie, Omega

Tankersley, T. M., Stillater Taylor, L. D., Chandler Taylor, Myrtle, Gage Terry, Lee Ross, Glenn Thomas, Elbert, Pampa, Tex. Thompson, Leslie P., Wellston Thompson, Ruth, Stillater

Walker, Milton, Sapulpa Wallace, Mary, Stillwater Weaver, Walter, Stillwater Welch, Wm. D., Albion Wesner, John, Foss Whisler, Evert, Watonga Whisler, Maburn, Watonga White, Bob, Vinita Whitham, Blanche, Luther

Zuck, A. B., Stillwater

"Deceased

Lewis, Jay, Ponca City Lawrence, Chas., Mill Creek Lilley, John, Stillwater Long, C. May, Cushing Love, Harry, Idabel Lytton, Alyna, Stillwater

Markwell, Rackel, Stillwater Merica, Glenn, Sayre Miller, Ruth, Perkins Mitchell, Lulu, Stillwater Mittendorf, Oscar, Calumet Moore, Z. L., Roosevelt Munday, Lloyd, Wanette Morrison, Willis, W., Bartlesville

Newman, Hazel, Avery Nims, Albert, Cushing Noble, C. C., Sallisaw Norris, Percy, Reed

Oldham, Lola, Stillwater

Pitzer, Florence, Stillwater Postelle, Ruth, Stillwater Potter, Cecil, Stillwater Potter, Hulda, Stillwater

Roberts, Walter, McLoud Rodke, David, Paoli Rouse, Claud, Pleasant Valley Rundell, Arnold, Prague Rutter, Earl, Stillwater

Smith, Bryan, Sophia
Smith, Walter, Vici
Smith, Albert, Weleetka
Stanley, Bryan, Wister
Starr, Fred, Reed
Staton, Robert, Addington
Stephens, Hazel, Manvel, Tex.
Stringer, Walter, Ochelata
Stockton, Julia, Perkins
Stuteville, G. C., Alfalfa
Swanson, Florence, Stillwater
Swartz, Bethany, Meno
Swartz, Maggie, Meno
Swim, George, Stillwater

\*Thompson, Verda B., Stillater Tingle, J. P., Meridian, Miss. Tilton, R. T., Nardin Trekell, Lester, Stillwater Tucker, Pansy, Glencoe Turner, Hershell, Scottsville, Kv.

Wiggs, Elsie, Manford Wiley, Ross L., Perkins Williams, Roy, Geary Wilson, Elliott, Cushing Wilson, Eva, Cushing Woolsie, Lewis, Watonga Woods, Roy, Randlett Young, Varle, Stillwater

### Special

Albert, Blanche, Stillwater

Bilyeu, J. R., Stillwater

Cherry, Rosa, Seminole

Doherty, Inez, Cambridge, Kans.

Emmons, Mrs. Clara, Vinita

Gray, Willis, Stillwater

Henderson, May, Stillwater Hildebrand, Mrs. Clara, Stillwater

Jackson, V. T., Stillwater

Odor, Ralph, Arcadia

Patterson, Edna, Okemah

Rapp, J. M., Stillwater Roark, Pearl, Coyle

Swartz, Sarah, Meno

Thompson, Edna, Wellston

Vesper, Elizabeth, Mazie

Bradford, Florence, Cushing

Cunningham, Anna, Stillwater

Dolphin, Elizabeth, Stillwater

Foster, Mabel, Perry

Green, Thomas, Milton

Hilgenberg, R. C., Stillwater Howard, Eva. Louis

McCarrell, Fred, Wanette

Powell, Lottie, Stillwater

Robertson, Lola, Stillwater

Turner, Pearl, Scottsville, Ky. White, Emma, Redmoon

### **Business Class**

Autry, L. R., Stillwater Avant, Emma, Clinton

Booker, Howard, Durant Breckenridge, R., Kremlin Brown, Virgil, Buffalo Bryan, Ila C., Stillwater Burnham, Ruth, Stillwater Burnham, S. J., Stillwater

Cochran, Ada, Stillwater Coleman, Ray, Elk City Cowan, Maude, Jennings Crain, Selma, Vinita

Drake, Ralph, Gage Durham, G. C., Mobeetie, Tex. Dutcher, Carrie, Altus Dutcher, Mary, Altus

Edwards, Jennie, Dustin

Francis, Annie, Fort Cobb

Gordon, Isla, Stillwater

Hayes, Margaret, Stillwater Heatly, R. O., Altus Henderson, Geo., Smithville Higgins, A. W., Stillwater Hill, Laura, Newkirk Hite, Amy, Glencoe Hutchins, B. F., Faxon Hubbell, Floyd, Stroud Hughes, Earl, Kaw City

Knowles, Leah, Stillwater Krebs, Paul, Kaw City

Albert, Rose, Stillwater Andrew, Eunice, Stillwater Antle, Alma, Stillwater

Baker, Stanley, Vici Ball, Flynn, Okemah Ballanger, Esta, Sulphur Bell, Sara, Kiefer Berryhill, Roby, Stillwater Bingham, H.B., Minco

Cantwell, Roberta, Stillwater Casto, C. E., Piedmont Chilcote, Maude, Stillwater Churchill, Edna, Guthrie

Davis, Marie, Nelagoney Defenbaugh, Loyd, Amarillo, Tex Dolezal, Horace, Perry Donart, Julia, Stillwater

Earp, Ona, Stroud Eck, L. J., Piedmont

Fessler, H. B., Cleveland

Gibbs, Dudley, Miami Gillum, J. L., Minco

Hale, E. M., Pryor
Hall, Wm. I., Stillwater
Hall, C. L., Ardmore
Hall, H. C., Stillwater
Hall, Mrs. Beulah, Stillwater
Hamlin, W. E., Stillwater
Hames, Anna, Stillwater
Harnden, Merrill, Stillwater
Harris, B. C., Ardmore

Irwin, Will L., Supply

Kelly, Shannon, Stillwater Key, Homer, Wewoka Knight, Richard, Stillwater Leahy, M. D., Pawhuska Lewis, Ira, Ponca City Livergood, Thurman, Newkirk

McCoy, Maybelle, Stillwater

McElroy, Mrs. C. H., Stillwater Mackenzie, Francis, Stillwater Macklin, Maud, Ripley Matthews, Logan, Sapulpa Mathies, J. Paul, Wister McMillan, Rock, Clarita Mcadville, Carrie, Stillwater

Nelson, Okey, Stillwater Newman, Leone, Belle Plane, Kans.

Overstreet, Lucille, Stillwater

Parmley, Eula, Stillwater Patton, Ella, Stillwater Phelps, Lillian, Cushing Pendley, Norman, Jones

Ray, Florence, Stillwater Reeves, Ruby, Tulsa Rickard, C. H., Stillwater

Sharp, Ruth, Stillwater Shepard, Esther, Stillwater Shively, Hazel. Stillwater Slaughter, Lucy, Stillwater Smith, Claude, Stroud Stallings, Maude, Stillwater

Tarver, L. L., Stillwater Thurman, R. B., Ochiltree, Tex. Toles, Holland, Wapanucka

Underwood, Leonard, Morrison

Van Lehn, Glenn, Greenfield Vermillion, Carrie, Stillwater Waggoner, Addie, Marshall

Young, V. S., Waukomis

Lobsitz, A. H., Perry Love, Sidney, Idabel

McCoy, Minnie, Stillwater

Million, Burrel, Supply Miller, H. C., Shattuck Moore, Helen, Stillwater Monday, Chas. Stillwater Morgan, Bernice, Stillwater Murphy, C. M., Stonewall

Newman, Pearl, Carter Norman, Victor, Stillwater

Odam, A. M., Stonewall

Poole, C. M., Stillwater Pope, C. C., Chester Prince, Hope M., Vernon, Tex. Pruitt, Raymond, Cushing

Riederer, Florence, Stillwater Roark, Mable, Coyle Rock, Lois V., Pawnee

Steen, Lucille, Stillwater Spear, Agatha, Stillwater Steward, L. E., Stillwater Stone, Bess, Okemah Swanson, Ethel, Stillwater

Tomlin, Jno. T., Foraker Tucker, D. B., Stillwater Tuttle, Jas. B., Tuttle

Wiley, Richard D., Sanger, Tex. Woods, Ed, Altus

### Twenty Weeks' Short Course in Agriculture and Domestic Economy

Beach, Celeste, Glencoe Beach, Clyde, Glencoe Binder, Alma, Comanche

Carlile, Perry, Lahoma Carlile, Ruth, Lahoma Clausen, Olga, Sumner

Dester, Herbert, Deer Creek

Edgerton, Flossie, Stillwater Edgerton, Viva, Stillwater

Frede, Elmer, Altus Frede, Hulda, Altus

Goldsmith, Parker, Pond Creek Greene, Courtney, Stillwater

Hall, Raymond, Berwyn, Ill. Hewett, Thaddeus, Tyrone Hickman, Jerry, Snyder

Ingersoll, D. W., Prescott, Ark.

Karban, B. R., Enid

Latscher, Emma, Deer Creek Latscher, Paul, Deer Creek Bierschenk, Samuel, Edmond Blanch, J. H., Stillwater Bloyd, Oscar, Alva

Cramer, John, Okeene Cunningham, Leon, Edmond

Dolezal, Frank, Yukon

Ehlers, John, Lahoma

Fyffe, Ira, Meno

Greene, Herbert Lee, Miles Groeneman, Armin, Miami

Hickman, Bessie, Perkins Hickman, Masel, Perkins

Jackson, Oliver J., Muskogee

Lillard, W. H., Pawhuska

Maly, Karel, Breckenridge Miller, Hobart, Gibbon

Parker, Theodore, Arthur

Reid, J. R., Stillwater Reid, A. L., Stillwater Rowland, Rex, Piedmont

Sharkey, Ora, Pond Creek Selby, James D., Stillwater Skeen, A. J., Fort Worth, Tex. Smith, Virgil, Tulsa Springer, Paul, Pawnee

Trekell, Wm. A., Stillwater Trenfield, Ray, Higgins, Tex.

Vincl, Louis, Hunter

Wallen, Stuvie, Bernice Walter, Leslie, Stillwater Wetzel, Dr. Carl, Stillwater Miller, Henry L. Charleston

Precure, Chas., Choctaw

Rowland, Mrs. H. K., Piedmont Rucker, John, Doff

Squires, Roy, Deer Creek Sudik, Victor, Oklahoma City Swagerty, Ollie, Fletcher Swanson, J. L., Roosevelt Swiggett, Guy, Lahoma

Tribble, Clarence, Navina

Vogal, Carl W., El Reno

Walla, Libbia, Prague Wicke, Paul, Deer Creek

### Farmers' Cotton Grading Course

Ball, Robert, Cement Beller, C. C., Stigler Bonns, H. W., Quinton Bowers, Chas. R., Stillwater

Carlisle, George, Maramec Clark, A. C., Braggs

Dalton, Chas. J., Stillwater

Ferguson, F. F., Miles

Gordon, A. J., Fav

Harrison, L. D., Oklahoma City Hays, Sade, Stillwater Hennesy, M. F., Olney Henson, Albert, McLoud

Jackson, W. E., Coweta Jacob, A. W., Stillwater

Lillard, Herbert, Stillwater Lindsay, John G., Norman Linton, Shannon, Gibson

McLelland, Wm., Stillwater McDaniel, G. W., Stigler McKnight, F. W., Oklahoma City

Nunn, C. N., Okemah

Olnes, W. A., Pawnee

Pauntler, J. B., Bixby Peebles, H. S., Oklahoma City

Renfro, I. C., Sulphur Roberts, Noel T., Mangum Robertson, J. W., Stillwater

Schofield, H. N., Harrah Sneed, C. P., Eufaula

Teader, S. T., Mountain Park Thomas, Battle, Carney Thompson, B. F., Bokoshe Thompson, Dan, Ryan

Wade, Rund, Cleburne, Tex. Ward, Coleman J., Thackerville Burchman, J. S., Bokoshe Burge, D. M., Alfalfa Buzzard, Roy, Luther

Crawford, G. L., Ashland, Miss.

Fowler, J. E., Stillwater

Hillman, R. H., Oklahoma City Hinds, C. L., McComb Hodges, J. E., Hugo Holder, D. B., Stroud

Jones, W. A., Wynnewood

Locke, Joe B., Sulphur Locke, W. B., Sulphur Lowrie, M. H., Cowlington

Mascho, T. E., Chandler Mayo, E. L., Hugo Memminger, Chas. B., Atoka

Opdyk, E., Lamar

Poole, E. M., Hobart

Romano, John, Sallisaw Rumsey, Lanzo, Stidham Russell, B. W., Walter

Swartz, W. L., Stillwater

Tindall, L. W., Muskogee Tollman, A. M., Guthrie Tudall, Jesse G., Muldrow

Warren, T. J., Oklahoma City White, John M., McAlester

### SUMMARY OF STUDENTS BY CLASSES

### Session 1914-15

Graduate students	18
Graduate students  Lunior class	107
	63
Sophomore class	202
Freshman class	203
Preparatory engineers	19
Sub-Freshman class	235
Specials	- 28
Business course	129
Twenty Weeks' Short Course in Agriculture and Domestic	65
Short Course in Butter and Ice Cream Making	9
Summer School	402
Cotton Grading School	63
Total	1,543
Special School for Boys and Girls at Oklahoma State Fair	118
Farmers' Short Course, January, 1914	645
Total	2,306

### ALUMNI

M. J. Otey, '02, Stillwater, Okla	President
M. F. MITSCHRICH, '13, Pittsburgh, PaFirst Vice	
H. R. HEDGER, '13, Stillwater, OklaSecond Vice	
Ernest Whitlock, '14, Wewoka, OklaThird Vice	
C. H. McElroy, '06, Stillwater, Okla	.Secretary
O. T. Peck, '08, Stillwater, Okla	Treasurer

The following is a list of the graduates of the College, and in each case the address and occupation is given as correctly as the Secretary's records show. In case of change of address, it is desired that graduates advise the Secretary of same.

Ashanan Manganet 1012 at Home	Tankananilla Elanida
Acheson, Margaret, 1912, at Home	Jacksonville, Florida
Adams, A. W., 1896, Real Estate	Ardmore, Oklahoma
Adams, J. H., 1896, Real Estate	Ardmore, Oklahoma
(Adams) Short, Myrtle, 1913, at Home	Broken Arrow Oklahoma
(Aikins) McKeeman, Evelyn, 1911, at Home	Hartford Connecticut
(Akins) McKeenan, Evelyn, 1911, at Home	Trainfold, Connecticut
Akagi, Yutaka, 1912, Professor of Agriculture	Bingo, Japan
Albert, H. R., 1912	Pocassett, Oklahoma
Allen, H. S., 1910, Civil Engineer.	Honduras, Central America
Anderson, A. B., 1902, City Engineer. Anderson, A. W., 1900, Law.	Toneka Kansas
Anderson A. W. 1000 I ow	Woodward Oldahoma
Anderson, A. W., 1900, Law	
Anderson, R. E., 1908, Law.	San Diego, California
Atkinson, Mary B., 1906, at Home	Stillwater, Oklahoma
Baade, H. J., 1910, County Agent.	Nana California
Paint D O 1009 Burn Food Chamiet	Forms North Delecte
Baird, R. O., 1908, Pure Food Chemist	raigo, North Dakota
Baker, De La Rue, 1914, Instructor in High School	Cushing, Oklanoma
Ball, H. L., 1905, President John Deitz Mfg. Co	Cincinnati, Ohio
Barnes, Henry Dale, 1914, Farmer	Banner, Oklahoma
Bartlett, E. C., 1912, Student of Uni. of Pennsylvania. (Bellis) Means, Ida Olive, 1914, at Home. Bennett, Paul, 1908, Commissioner of Water and Light Bentley, M. R., 1909, Farmer. Bilyeu, R. I., 1904, Principal Ward School.	Dittabunah Dannauluania
Bartiett, E. E., 1912, Student of Oni. of Fennsylvania	Pittsburgh, Pennsylvania
(Bellis) Means, Ida Olive, 1914, at Home	Hurley, New Mexico
Bennett, Paul, 1908, Commissioner of Water and Light	Stillwater, Oklahoma
Bentley, M. R., 1909, Farmer	
Bilvey R I 1904 Principal Ward School	Frid Oklahoma
Distance C D 1011 Ame Distance of Toron	A. T.
Blackwell, C. P., 1911, Agri. Div., Uni. of Texas	Austin, Texas
Bloom, C. B., 1913, American Cook Coke Company	Waukomis, West Virginia
Blue, F. R., 1909, Employed by Agents of Gen. Elec. Co	Osaka, Japan
Blue True C. 1908 Bagnell & Hillis Company	Higashaka Araka Tanan
Boley A I 1908 Chief Flex II S Navy Dock	Washington D C
Boley, A. L., 1908, Chief Elec. U. S. Navy Dock	Call Tala City Tity
Bonar, H. 1., 1913, Salt Lake and Otan R. R.	Salt Lake City, Otah
Boutin, H. C., 1909, Com. Eden Co	Chicago, Illinois
Bowers, Chas., 1913, Agriculturist	Marksville, Louisiana
Bowers, G. W., 1897, Conductor Frisco Ry	Enid. Oklahoma
Bowers, R. D., 1904, Law	Roswell New Mexico
(Broden) Pohineon Certrude 1906 at Home	Laxington Virginia
(Bradwell) Newby, Ollie, 1909, at Home	Mathall Oldahama
(Bradwell) Newby, Ollie, 1909, at Home	Mulhall, Oklahoma
Brannin, Louis, 1914, Farmer	Dallas, Texas
(Bras) Owens, Ruth, 1907, at Home	Okeechobee, Florida
Breuer, E. H., 1911, Rock Island Railway Company	Jacksboro, Texas
Brodell, Arthur Clarence, 1914, Superintendent Schools	Ralston Oklahoma
A charles II-al 1014 at II-an	II
(Brooke) Schreiber, Hazel, 1914, at Home Brown, C. B., 1913, Dry Land Farmer	Harriston, Virginia
Brown, C. B., 1913, Dry Land Farmer	Garden City, Kansas
Brown, Ross E., 1905, at Home Brown, Chas. W., 1907, Assistant Experiment Station	Perkins, Oklahoma
Brown, Chas. W., 1907, Assistant Experiment Station	East Lansing, Michigan
Brown I I 1903 Westinghouse Mfg Co	Chicago Illinois
Brown, J. J., 1903, Westinghouse Mfg. Co	Schenoctade New V-1
brown, Onver Contact, 1914, General Electric Company	rememeetady, New York
Buchanan, W. A., 1912, Extension Dept., Iowa State Coll-	egeAmes, lowa

Buffington, Betha, 1912, Teacher. Bullen, B. C., 1912, City Hospital, Blackwells Island	Brigham, Utah
Bullen, B. C., 1912, City Hospital, Blackwells IslandN	ew York City, New York
Rullen, C. K., 1909, Hill Oil and Gas Company	Depew, Oklahoma
Bullock, N. P., 1909, Farmer	Stillwater, Oklahoma
Burke, Elizabeth, 1913, Stenographer President's Office	Dissected Wash Vincinia
Rurlison Wm I 1005 Asst Prof Agranamy Uni of Illin	Diueneid, west virginia
*Burnett, Roy E. 1905	ioisCibana, inniois
Database and Lang Lang and Language and Lang	
Camp, W. E., 1910, General Electric Company	Sacramento, California
Campbell, Milton Bryant, 1914, Stockman	Minco, Oklahoma
Campbell, Viola, 1913, at Home	Bushville Indiana
Carron Ross I. 1907 Hardware Rusiness	Perkins Oklahoma
Carson, Susie S., 1902. Hardware Business	Perkins, Oklahoma
Carter, W. C., 1911, Indus. Sales Dept., Westinghouse Co	.Pittsburgh, Pennsylvania
Casali, Louise, 1911, Professor Domestic Science, State Norr	nalAlbion, Idaho
Caudell, A. N., 1897, Bureau of Entomology	
Chandler Emma 1007 Extension Division A and M College	Stillwater Oklahoma
Chandler, F. R., 1904 Assistant Master Mechanic South	Rethlehem Pennsylvania
(Chester) Goodwin, Bertha, 1907, at Home.	Fort Dodge, Kansas
(Chivington) Tyson, Anna, 1911, Drug Business	Tulsa, Oklahoma
Clark, Arthur C., 1906, Hardware Business	Claremore, Oklahoma
Clark, F. J., 1908, Cir. Mgr. Oklahoma Farm Journal	Oklahoma City, Oklahoma
Clausen P T 1012 Nauv	goyou, Philippine Islands
"Burnett, Roy E., 1905, Asst. Frot. Agronomy, Uni. of Illin" "Burnett, Roy E., 1905.  Camp. W. E., 1910, General Electric Company.  Campbell, Milton Bryant, 1914, Stockman	Stillwater Oklahoma
Clausen, R. E., 1910, Teacher	Berkeley, California
Cloukev, H. U., 1909, Assistant Chemist	Oklahoma City, Oklahoma
Cobb, A. L., General Electric Company	Schenectady, New York
(Payne) Cobb, Mary, 1913, at Home	Amherst, Massachusetts
Coburn, Carroll, 1912. General Electric Company	Schenectady, New York
Conklin, Henry Edward, 1914	viikinsburg, Pennsylvania
Cole Frank 1908 Oil Business	Nowata Oklahoma
Comstock, F., 1912, Elec. A. Manager	Mexico City. Mexico
Comstock, Harry, 1905, General Manager Clo. Co	Mineville, New York
Connell, W. B., 1912, Graduate Student	Cambridge, Massachusetts
Cook, H. P., 1912, Teacher.	Guthrie, Oklahoma
Crawford C W 1900 Farmer	Anache Oklahoma
Crocker, Fred. 1912. Bacteriologist.	Birmingham. Alabama
Dale, Ernest Breck, 1914, Electrician	Arkansas City, Kansas
Davis, R. N., 1911, Managing Dairy	Stillwater Oldahoma
Dolde W F 1012 Graduate Student	Corvallie Washington
(Donart) Coffey, Cora M., 1900, at Home.	Lawton, Oklahoma
Donart, C. R., 1899, Hardware Business	Altus, Oklahoma
Donart, Gladys Kinyon, 1914, at Home	Stillwater, Oklahoma
Dorman, W. S., 1911, Engineer on Roosevelt Dam	Pitta Gold Manager Arizona
Drake T I 1013 Stenographer	Lake Worth Florida
Diabe, 1. J., 1910, Dechographer	
Drummond, Frederick Gentner, 1914, Graduate Student	Cambridge, Massachusetts
Drummond, Frederick Gentner, 1914, Graduate Student  Duck, F. E., 1896, Farmer	Cambridge, Massachusetts Stillwater, Oklahoma
Drummond, Frederick Gentner, 1914, Graduate Student	Cambridge, Massachusetts Stillwater, Oklahoma Little Rock, Arkansas
Drummond, Frederick Gentner, 1914, Graduate Student	Cambridge, MassachusettsStillwater, OklahomaLittle Rock, ArkansasStillwater, Oklahoma
Drummond, Frederick Gentner, 1914, Graduate Student.  Duck, F. E., 1896, Farmer.  Duck, T. W., 1912, Santa Fe Ry.  Durham, S. B., 1904, Instructor in Animal Husbandry.  (Dysart) Teter, Minnie, 1899, at Home.	Cambridge, MassachusettsStillwater, Oklahoma Little Rock, ArkansasStillwater, OklahomaTulsa, Oklahoma
Dale, Ernest Breck, 1914, Electrician  Davis, R. N., 1911, Managing Dairy.  DeBord, George Gorham, 1914, Post Graduate Student  Dolde, W. E., 1912, Graduate Student  (Donart) Coffey, Cora M., 1900, at Home  Donart, Gladys Kinyon, 1914, at Home  Dorman, W. S., 1911, Engineer on Roosevelt Dam  Dougan, E. E., 1907, Electrician  Drake, T. J., 1913, Stenographer  Drummond, Frederick Gentner, 1914, Graduate Student  Duck, F. E., 1896, Farmer  Duck, T. W., 1912, Santa Fe Ry  Durham, S. B., 1904, Instructor in Animal Husbandry  (Dysart) Teter, Minnie, 1899, at Home  Eads. Velma, 1913, at Home	Cambridge, MassachusettsStillwater, OklahomaLittle Rock, ArkansasStillwater, OklahomaTulsa, OklahomaFrederick, Oklahoma
Drummond, Frederick Gentner, 1914, Graduate Student	Cambridge, Massachusetts Stillwater, Oklahoma Little Rock, Arkansas Stillwater, Oklahoma Tulsa, Oklahoma Frederick, Oklahoma Brenham, Texas
Drummond, Frederick Gentner, 1914, Graduate Student	Cambridge, Massachusetts Stillwater, Oklahoma Little Rock, Arkansas Stillwater, Oklahoma Tulsa, Oklahoma Frederick, Oklahoma Brenham, Texas Columbia, Missouri
Drummond, Frederick Gentner, 1914, Graduate Student. Duck, F. E., 1896, Farmer. Duck, T. W., 1912, Santa Fe Ry. Durham, S. B., 1904, Instructor in Animal Husbandry. (Dysart) Teter, Minnie, 1899, at Home.  Eads, Velma, 1913, at Home. Eberle, Dovie, 1906, Instructor Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri. Epperson, Jessie Harrison, 1914, Bacteriologist.	Cambridge, Massachusetts Stillwater, Oklahoma Little Rock, Arkansas Stillwater, Oklahoma Tulsa, Oklahoma Frederick, Oklahoma Brenham, Texas Columbia, Missouri Birmingham, Alabama
Drummond, Frederick Gentner, 1914, Graduate Student.  Duck, F. E., 1896, Farmer.  Duck, T. W., 1912, Santa Fe Ry.  Durham, S. B., 1904, Instructor in Animal Husbandry.  (Dysart) Teter, Minnie, 1899, at Home.  Eads, Velma, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist  (English) Lantz, Maud M., 1907, at Home.  Evalish Wm. L. 1905, Extension Work Frise, Pr. Co.	Cambridge, Massachusetts Stillwater, Oklahoma Little Rock, Arkansas Stillwater, Oklahoma Tulsa, Oklahoma Frederick, Oklahoma Brenham, Texas Columbia, Missouri Birmingham, Alabama Willows, California
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Eads, Veima, 1913, at Home.  Eberle, Dovie, 1906, Instructor.  Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri.  Epperson, Jessie Harrison, 1914, Bacteriologist.  (English) Lantz, Maud M., 1907, at Home  English, Wm. L., 1905, Extension Work Frisco Ry. Co	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri
Drummond, Frederick Gentner, 1914, Graduate Student. Duck, F. E., 1896, Farmer. Duck, T. W., 1912, Santa Fe Ry. Durham, S. B., 1904, Instructor in Animal Husbandry. (Dysart) Teter, Minnie, 1899, at Home.  Eads, Velma, 1913, at Home. Eberle, Dovie, 1906, Instructor. Evans, A. Ray, 1912, Asst. Agronomist, Uni. of Missouri. Epperson, Jessie Harrison, 1914, Bacteriologist. (English) Lantz, Maud M., 1907, at Home. English, Wm. L., 1905, Extension Work Frisco Ry. Co. Fansher, R. A., 1912, Farmer. Fansher, Ted, 1913, Farmer. Faulds, N. M., City Engineer. Fisher, J. G., 1910, Instructor in High School. Flower, A. W., 1902, Railroad Service. (Foster) Rogers, Nell Hahnonah, 1914, at Home. Ford, M. G., 1898, Grain and Real Estate Ford, W. W., 1913, Architect. Forrester, D. R., 1913, Postgraduate, Iowa State College. Francis, Victor, 1908, Superintendent Power Plant.	Frederick, Oklahoma — Brenham, Texas — Columbia, Missouri — Birmingham, Alabama — Willows, California — St. Louig, Missouri

<sup>\*</sup>Deceased.

Tricdeman, William Gustav, 1914, 10st Graduate Student.	Stillwater Oldahama
(Frieday) Barnett Almira 1012 at Home	Croslitt Arkansas
Francel H H 1012 Civil Engineer	M-C-t Arkansas
Frensel, H. H., 1912, Civil Engineer	McGenee, Arkansas
Frier, C. H., 1911, Electrical Engineer	Schenectady, New York
Friedeman, William Gustav, 1914, Post Graduate Student. (Frieday) Barnett, Almira, 1912, at Home. Frensel, H. H., 1912, Civil Engineer. Frier, C. H., 1911, Electrical Engineer. Funda, F. P., 1910, Draftsman.	El Reno, Oklahoma
Gage, E. H., 1908, Engineer	Colorado Springs, Colorado
Gaasch Glenn 1000 Civil Engineer	Tules Oklahoma
Call D W 1001	I uisa, Okianoma
Callaghan F C 1000 Dinastan of Atlastic	D 14
Gallagner, E. C., 1909, Director of Athletics	Baldwin, Kansas
Galyon, E. U., 1911, Westinghouse Electric Company	Pittsburgh, Pennsylvania
Gammie, R. J., 1910, Civil Engineer	Texarkana, Texas
Gaudian, Will, 1912, Isthmian Canal Commission	Corezal, C. R., Panama
Gardner, Frank, 1911, Short, Strong & Webster Co	Dallas, Texas
Getgev. John Jacob. 1914. Instructor in Agriculture	Helena, Oklahoma
Gilbert N T 1808 Ranker	Bristow Oklahoma
Gilbert I C 1904 Professor in School	Shanghai China
Cilman T D 1012 Floatnician	Tama Managhan, China
Glimer, 1. F., 1913, Electrician	Lynn, Massachuseus
Goii, 1. 1., 1900, Instructor Gem City Business College	Quincy, Illinois
Gollehon, Floyd, 1910, Isthmian Canal Commission	Corezal, C. R., Panama
Goltry, H. U., 1913, Farmer	Marietta, Oklahoma
Geom, Austin, 1912, Banker	Ripley, Oklahoma
Frier, C. H., 1911, Electrical Engineer. Funda, F. P., 1910, Draftsman.  Gage, E. H., 1908, Engineer. Gaasch, Glenn, 1909, Civil Engineer. Gall, R. V., 1901. Gallagher, E. C., 1909, Director of Athletics. Galyon, E. O., 1911, Westinghouse Electric Company. Gammie, R. J., 1910, Civil Engineer. Gaudian, Will, 1912, Isthmian Canal Commission. Gardner, Frank, 1911, Short, Strong & Webster Co Getgey, John Jacob, 1914, Instructor in Agriculture Gilbert, N. T., 1898, Banker. Gilbert, N. T., 1898, Banker. Gilbert, J. C., 1904, Professor in School. Gilmer, T. P., 1913, Electrician. Goff, T. T., 1900, Instructor Gem City Business College. Gollehon, Floyd, 1910, Isthmian Canal Commission. Goltry, H. U., 1913, Farmer. Geom, Austin, 1912, Banker. Geom, Austin, 1912, Banker. Gougler, F. A., 1909, Graduate Student. Graham, Quentin, Westinghouse Electric Company. Granberry, Carl Ellis, 1914, Graduate Student. Granberry, Carl Ellis, 1914, Graduate Student. Gravelle, E. E., 1913, Civil Engineer. Gray, W. F., 1912, Farmer. Gray, W. F., 1912, Farmer. Gray, W. F., 1912, Parmer. Greiner, F. W., 1899, Chemist in Ironworks. Gregory, H. W., 1912, Dairyman Gulick, H. S., 1903, Chemist American Steel Company. Guynn, R. N., 1904, Civil Engineer. Hagar, Hyral S., 1910, Stenographer.	Manhattan, Kansas
Graham, Douglas Snoden, 1914, Graduate Student	Stillwater, Oklahoma
Graham Quentin Westinghouse Electric Company	Pittshurgh Pennsylvania
Grapherry Carl Ellie 1014 Graduate Student	University Mississingi
Carrelle E E 1012 Civil Engineer	Wishits Falls Target
Gravelle, E. E., 1915, Civil Engineer	wichita rails, lexas
Gray, W. F., 1912, Farmer	May, Oklanoma
Greiner, F. W., 1899, Chemist in Ironworks	Gary, Indiana
Gregory, H. W., 1912, Dairyman	Brookings, South Dakota
Gulick, H. S., 1903, Chemist American Steel Company	East St. Louis, Illinois
Guynn, R. N., 1904, Civil Engineer	Brooklyn, New York
ou),,,,	,
Hagar Hyral S 1910 Stenographer	Larimee Wyoming
Hagar William Edgar 1014 Farmer	Stillwater Oklahoma
Handal, William Eugal, 1914, Palmet	Ol-lahama Cita Ol-lahama
Hancock, A. V., 1907, S. W. General Electric Co	Okianoma City, Okianoma
Hanninn, Edna Josephine, 1914, High School Instructor	Medford, Oklahoma
Hall, Ethel Fay, 1914, at Home	Lone Wolf, Oklahoma
Hamilton, Fearn, 1913, at Home	Stillwater, Oklahoma
Hamilton, F. C., at Home	Little Rock, Arkansas
Hamblin, Clyde M., 1904, Electrical Expert	Washington, D. C.
Hamon C A 1910 Westinghouse Electric and Mfg Co	Wilkinshurg Pennsylvania
Hamon P I 1011 II S Purson of Mines	
	Champaign Illinois
Hamon Farmin 1000 at Hama	Champaign, Illinois
Hamon, Fannie, 1908, at Home.	
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California
Hamon, Fannie, 1908, at Home	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company	
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem  Hart. Haden, 1913, Assistant in Animal Husbandry.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istryStillwater, Oklahoma Ames, Iowa
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem  Hart, Haden, 1913, Assistant in Animal Husbandry.  Lartshorne, E., 1912. Commonwealth-Edison, Company.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Covozal, C. Z. Panama
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem  Hart, Haden, 1913, Assistant in Animal Husbandry.  Hartshorne, E., 1912, Commonwealth-Edison Company.  Hartshorne, E., 1912, Director, U.S. Experiment Sta	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istryStillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panams
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem Hart, Haden, 1913, Assistant in Animal Husbandry.  Harttenbower, A. C., 1905, Director U. S. Experiment Sta	Champaign, Illinois  Fort Lauderdale, Florida  Los Angeles, California  Chicago, Illinois istry Stillwater, Oklahoma  Corozal, C. Z., Panamation  Island of Guam  Tulsa, Oklahoma
Hamon, Fannie, 1908, at Home	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panama ition. Island of Guam Tulsa, Oklahoma
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem  Hart, Haden, 1913, Assistant in Animal Husbandry.  Hartshorne, E., 1912, Commonwealth-Edison Company.  Hartenbower, A. C., 1905, Director U. S. Experiment Sta  Hartman, T. J., 1898, Banker.  Harris, Inez June Bibby, 1914, at Home.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istryStillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panams tion
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem Hart, Haden, 1913, Assistant in Animal Husbandry.  Hartshorne, E., 1912, Commonwealth-Edison Company.  Hartenbower, A. C., 1905, Director U. S. Experiment Sta Hartman, T. J., 1898, Banker.  Harrison, L. D., 1913, District Agricultural School.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panama tion. Island of Guam Tulsa, Oklahoma Bismark, Missouri Tishomingo, Oklahoma
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company.  Harnden, E. E., 1912, Assistant in Bacteriology and Chem  Hart, Haden, 1913, Assistant in Animal Husbandry.  Hartshorne, E., 1912, Commonwealth-Edison Company.  Hartenbower, A. C., 1905, Director U. S. Experiment Sta  Hartman, T. J., 1898, Banker.  Harris, Inez June Bibby, 1914, at Home.  Harrison, L. D., 1913, District Agricultural School.  Harvey, C. E., 1911, with State Architect.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istryStillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panams tionIsland of GuamTulsa, Oklahoma Bismark, Missouri Tishomingo, Oklahoma Chicago, Illinois
Hamon, Fannie, 1908, at Home. (Hancock) Hess, Joy B., 1909, at Home. Hann, F. R., 1912, Commonwealth-Edison Company. Harnden, E. E., 1912, Assistant in Bacteriology and Chem Hart, Haden, 1913, Assistant in Animal Husbandry. Hartshorne, E., 1912, Commonwealth-Edison Company. Hartenbower, A. C., 1905, Director U. S. Experiment Sta Hartman, T. J., 1898, Banker. Harrison, L. D., 1913, District Agricultural School. Harvey, C. E., 1911, with State Architect. Harvey, J. W., 1913, General Electric Company.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panama ition
Hamon, Fannie, 1908, at Home.  (Hancock) Hess, Joy B., 1909, at Home.  Hann, F. R., 1912, Commonwealth-Edison Company  Harnden, E. E., 1912, Assistant in Bacteriology and Chem Hart, Haden, 1913, Assistant in Animal Husbandry.  Hartshorne, E., 1912, Commonwealth-Edison Company  Hartenbower, A. C., 1905, Director U. S. Experiment Sta Hartman, T. J., 1898, Banker.  Harris, Inez June Bibby, 1914, at Home.  Harrison, L. D., 1913, District Agricultural School  Harvey, C. E., 1911, with State Architect.  Harvey, J. W., 1913, General Electric Company  Hastings, Alice A., 1905	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panams ition. Island of Guam Tulsa, Oklahoma Bismark, Missouri Tishomingo, Oklahoma Chicago, Illinois Schenectady, New York Stillwater, Oklahoma
Hamon, Fannie, 1908, at Home. (Hancock) Hess, Joy B., 1909, at Home. Hann, F. R., 1912, Commonwealth-Edison Company. Harnden, E. E., 1912, Assistant in Bacteriology and Chem Hart, Haden, 1913, Assistant in Animal Husbandry. Hartshorne, E., 1912, Commonwealth-Edison Company. Hartenbower, A. C., 1905, Director U. S. Experiment Sta Hartman, T. J., 1898, Banker. Harrison, L. D., 1913, District Agricultural School. Harvey, C. E., 1911, with State Architect. Harvey, J. W., 1913, General Electric Company. Hastings, Alice A., 1905. Hedger, H. R., 1913, Assistant Extension Division.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panama Tulsa, Oklahoma Bismark, Missouri Tishomingo, Oklahoma Chicago, Illinois Schenectady, New York Stillwater, Oklahoma Stillwater, Oklahoma
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Gulick, H. S., 1903, Chemist American Steel Company. Guynn, R. N., 1904, Civil Engineer.  Hagar, Hyral S., 1910, Stenographer. Hagar, William Edgar, 1914, Farmer. Hancock, A. V., 1907, S. W. General Electric Co. Hannifin, Edna Josephine, 1914, High School Instructor. Hall, Ethel Fay, 1914, at Home. Hamilton, Fearn, 1913, at Home. Hamilton, Fearn, 1913, at Home. Hamilton, C. A., 1910, Westinghouse Electric and Mfg. Co. Hamon, R. J., 1911, U. S. Bureau of Mines. Hamon, R. J., 1911, U. S. Bureau of Mines. Hamon, Fannie, 1908, at Home. Hanno, F. R., 1912, Commonwealth-Edison Company. Harnden, E. E., 1912, Assistant in Bacteriology and Chem Hart, Haden, 1913, Assistant in Animal Husbandry. Hartshorne, E., 1912, Commonwealth-Edison Company. Hartenbower, A. C., 1905, Director U. S. Experiment Sta Hartman, T. J., 1898, Banker. Harrison, L. D., 1913, District Agricultural School. Harvey, C. E., 1911, with State Architect. Harvey, J. W., 1913, General Electric Company. Hastings, Alice A., 1905. Hedger, H. R., 1913, Assistant Extension Division. Hemphill, Ora, 1909, Miller Engraving Co. Herron, L. G., 1913, Assistant Extension Division. Herndon, May, 1914, Professor of Domestic Science. Herron, L. G., 1913, Assistant in Horticulture. Herrick, H. C., 1912, Automobile Business. Hiet, M. C., 1912, Electrician. (Hill) Bartlett, Vera May, 1912, at Home. Hildebrand, L. E., 1910, General Electric Company. Hines, E. G., 1905, Merkle-Hines Machinery Co. Hoke, H. G., 1907, Westinghouse Company. Hoke, H. G., 1907, Westinghouse Company. Hoke, G. E., 1911, A., T. & S. F. Ry Co. Hoke, Mac, 1912, Principal High School. Holford, Ina Crenshaw, 1914, at Home. Holleman, Mathilda Gertrude, 1914, at Home.	Champaign, Illinois Fort Lauderdale, Florida Los Angeles, California Chicago, Illinois istry Stillwater, Oklahoma Ames, Iowa Corozal, C. Z., Panama Tulsa, Oklahoma Bismark, Missouri Tishomingo, Oklahoma Chicago, Illinois Schenectady, New York Stillwater, Oklahoma Stillwater, Oklahoma Little Rock, Arkansas Stigler, Oklahoma Little Rock, Arkansas Stillwater, Oklahoma Enid, Oklahoma Enid, Oklahoma Stillwater, Oklahoma Little Rock, Arkansas Stillwater, Oklahoma Little Rock, Arkansas Milkinsburg, Pennsylvania Oklahoma City, Oklahoma Newkirk, Oklahoma Newkirk, Oklahoma Santa Fe, New Mexico Madill, Oklahom Frisco, New Mexico Moscow, Idaho Chicago, Illinois Schenectady, New York Albany, New York

Howell, Corl, 1906, Pacific Light and Water Co. Hubler, W. A., 1910, Farmer. Huffman, Louis Desenberg, 1914, Real Estate Huffmagel, Chas., 1913, Ohio University. Hunt, Gertrude, 1902, Instructor. (Hurst) Suits, Nina B., 1903, at Home. Hurst, B. B., 1901, Hospital Steward, U. S. Navy	Clandala California
Hubler, W. A., 1910, Farmer	Fairfax. Oklahoma
Huffman, Louis Desemberg, 1914, Real Estate	Lima, Ohio
Huffnagel, Chas., 1913, Ohio University	Columbus, Ohio
(Hurst) Suite Ning R 1903 at Home	San Diego, California
Hurst, B. B., 1901, Hospital Steward, U. S. Navy	Sitka Alaska
Ives, F. H., 1909, Professor of Agriculture	Edmond, Oklahoma
Jackson, William Edgar, 1914, Student Asst. in Entomolo	gy at A. and M.
College	Stillwater, Oklahoma
Jacob I. O 1913 Professor of Agriculture	Annoha Minnesota
James, Helen, 1913, Asst. Bookkeeper Stillwater National Ba	nkStillwater, Oklahoma
Janeway, Lenora, 1908, Professor Domestic Science High Sc	hoolAbilene, Texas
Janeway, Helen, 1913, Teacher	Bristow, Oklahoma
Tarrell A F. 1806 Santa Fe System	Pueblo Colorado
Jeffords, Mary, 1914, at Home	St. Louis, Missouri
Jeffords, S., 1912, County Demonstrator	Muskogee, Oklahoma
Jessee, W. B., 1911, Farmer	Supply, Oklahoma
(Johnson) Crosby Lucy 1912 at Home	Loveland Ohio
Jackson, William Edgar, 1914, Student Asst. in Entomolo College	Ada, Oklahoma
Johnson, Norma N., 1909, Instructor Domestic Science	Enterprise, Utah
Johnson, S. B., 1912, Professor of Horticulture	Tucson, Arizona
Johnston, J. C., 1905, Physician	Clay Center Kansas
Jones, E. L., 1904, Mgr. Columbus Electric Car Company	San Francisco, California
Jones, Eva, 1914, Rural Teacher	Arkansas City, Kansas
Jones, S. C., 1910, Allis-Chalmers Co	Norwood, Ohio
Jones, Daisy Ladine, 1914, at Home	Crystal Springs, Florida
Jordan, Charles Wear, 1914, Teacher	Fredericktown, Missouri
Kerr. R. H., 1903. Druggist	Washington D. C.
Kennon, W. D., 1914, Principal High School	Stillwater, Oklahoma
Kenyon, R. E., 1910, Electric Company	Oakland, California
Kenyon, R. S., 1903, Electrician, New Orleans St. Ry. Co	New Orleans, Louisiana
Kidd I. W. 1904 Draftsman	El Paso Texas
Kilpatrick, E., 1912, Professor of Agriculture	Fayetteville, Arkansas
(Kilpatrick) Gregory, May, 1914, at Home	Brookings, South Dakota
Kinder, W. E., 1913, Instructor in Mathematics	
King B D 1010 Civil Engineer	Wharton Texas
King, B. D., 1910, Civil Engineer	
King, B. D., 1910, Civil Engineer Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School	
King, B. D., 1910, Civil Engineer Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home	
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King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science. Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist. Kooken, E. R., 1910, Farm Demonstrator Knoblock, F. L., 1912, Architect. Krall, J. A., 1913, Graduate Student, Iowa State College. Kratka, Ralph, 1902, Farmer. Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Kansas City, Kansas Bonham, Texas Beaumont, Texas — Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado
Kerr, R. H., 1903, Druggist. Kennon, W. D., 1914, Principal High School. Kenyon, R. E., 1910, Electric Company. Kenyon, R. S., 1903, Electrician, New Orleans St. Ry. Co. Kezer, C. L., 1901, Teacher. Kidd, J. W., 1904, Draftsman. Kilpatrick, E., 1912, Professor of Agriculture. (Kilpatrick) Gregory, May, 1914, at Home. Kinder, W. E., 1913, Instructor in Mathematics. King, B. D., 1910, Civil Engineer Kirkpatrick, Cecil, 1909, Professor of Domestic Science. Kirkpatrick, Katie C., 1911, High School. (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist. Kooken, E. R., 1916, Farm Demonstrator. Knoblock, F. L., 1912, Architect. Krall, J. A., 1913, Graduate Student, Iowa State College. Kratka, Ralph, 1902, Farmer Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College.	Goodwell Oklahoma Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Kansas City, Kansas Bonham, Texas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma
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King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist. Kooken, E. R., 1910, Farm Demonstrator. Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College. Kratka, Ralph, 1902, Farmer. Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College.  Lahman, Ruth Annie, 1914, at Home. Lahman, W. L., 1909, Ice Manufacturer. Lantz, C. R., 1907, Dredging Company, 108 Bond Street. Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey. Leteer, C. R., 1908, U. S. Experiment Farmer. Lewis, Arthur C., 1901, Entomologist. Lewis, E. G., 1896, Real Estate. (Lewis) Johnson, Myrtle I., 1910, at Home. Lewis, Carrie, 1905, at Home.	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Bonham, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma Pawnee, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home Knauss, E. J., 1905, Druggist Kooken, E. R., 1910, Farm Demonstrator. Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College Lahman, Ruth Annie, 1914, at Home Lahman, W. L., 1909, Ice Manufacturer. Lantz, C. R., 1907, Dredging Company, 108 Bond Street Lantz, C. R., 1913, U. S. Farm Demonstrator Leicht, H. S., 1911, U. S. Geological Survey Leteer, C. R., 1908, U. S. Experiment Farmer Lewis, Arthur C., 1901, Entomologist Lewis, E. G., 1896, Real Estate (Lewis, Johnson, Myrtle I., 1910, at Home Lewis, Carrie, 1905; at Home Lincoln, H. J., 1903, A., T. & S. F. Ry. Co.	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Kansas City, Kansas Beaumont, Texas Beaumont, Texas Mes, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Pawnee, Oklahoma Pawnee, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist. Kooken, E. R., 1910, Farm Demonstrator. Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer. Krepps, Samuel Jackson, Jr., Civil Engineer Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College  Lahman, Ruth Annie, 1914, at Home. Lahman, W. L., 1909, Ice Manufacturer. Lantz, C. R., 1907, Dredging Company, 108 Bond Street. Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey. Leteer, C. R., 1908, U. S. Experiment Farmer. Lewis, Arthur C., 1901, Entomologist. Lewis, Arthur C., 1901, Entomologist. Lewis, Carrie, 1905, at Home. Lincoln, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Seymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Denver, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Kansas Kingfisher, Oklahoma
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist Kooken, E. R., 1910, Farm Demonstrator Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College. Kratka, Ralph, 1902, Farmer Krepps, Samuel Jackson, Jr., Civil Engineer Kroshorn, Agnes, 1913, Colorado Woman's College  Lahman, Ruth Annie, 1914, at Home Lahman, W. L., 1909, Ice Manufacturer Lantz, C. R., 1907, Dredging Company, 108 Bond Street. Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey Letewis, Arthur C., 1901, Entomologist Lewis, Arthur C., 1901, Entomologist Lewis, Carrie, 1905, at Home Lincson, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer Lovett, A. L., 1908, Assistant Entomologist.	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Kansas City, Kansas Benham, Texas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma Pawnee, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Topeka, Kansas Kingisher, Oklahoma Corvallis, Oregon
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson,, 1910, at Home Knauss, E. J., 1905, Druggist Kooken, E. R., 1910, Farm Demonstrator. Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer. Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College Lahman, Ruth Annie, 1914, at Home Lahman, W. L., 1909, Ice Manufacturer. Lantz, C. R., 1907, Dredging Company, 108 Bond Street. Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey Leteer, C. R., 1908, U. S. Experiment Farmer Lewis, Arthur C., 1901, Entomologist Lewis, Carrie, 1905, at Home Lewis, Carrie, 1905, at Home Lincoln, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer Lovett, A. L., 1908, Assistant Entomologist Lovett, A. L., 1908, Assistant Entomologist Lovetl, Thomas J., 1912, Draftsman Southern California	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Bonham, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma Pawnee, Oklahoma Pawnee, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Corvallis, Oregon Corvalis, Oregon Edison Company
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Corvallis, Oregon Edison Company Los Angeles, California
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist. Kooken, E. R., 1910, Farm Demonstrator. Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer. Krepps, Samuel Jackson, Jr., Civil Engineer Krolshorn, Agnes, 1913, Colorado Woman's College Lahman, Ruth Annie, 1914, at Home. Lahman, W. L., 1909, Ice Manufacturer. Lantz, C. R., 1907, Dredging Company, 108 Bond Street Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey. Leteer, C. R., 1908, U. S. Experiment Farmer. Lewis, Arthur C., 1901, Entomologist Lewis, Arthur C., 1901, Entomologist Lewis, Carrie, 1905, at Home Lincoln, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer Lovett, A. L., 1908, Assistant Entomologist Lovell, Thomas J., 1912, Draftsman Southern California Lowry, C. H., 1902, Lawyer Lovery, Ethel, 1913, at Home	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Seymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Topeka, Kansas Kingfisher, Oklahoma Corvallis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Stillwater, Oklahoma
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist Kooken, E. R., 1910, Farm Demonstrator Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer Krepps, Samuel Jackson, Jr., Civil Engineer Krepps, Samuel Jackson, Jr., Civil Engineer Krobsorn, Agnes, 1913, Colorado Woman's College  Lahman, Ruth Annie, 1914, at Home Lahman, W. L., 1909, Ice Manufacturer Lantz, C. R., 1907, Dredging Company, 108 Bond Street. Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey Leteer, C. R., 1908, U. S. Experiment Farmer Lewis, Arthur C., 1901, Entomologist Lewis, Carrie, 1905, at Home Lincoln, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer Lovetl, A. L., 1908, Assistant Entomologist Lovetl, A. L., 1908, Assistant Entomologist Lovetl, Thomas J., 1912, Draftsman Southern California  Lowry, C. H., 1902, Lawyer Lowry, Ethel, 1913, at Home (Lowry) McKee, Theo., 1906, at Home (Lowry) McKee, Theo., 1906, at Home	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Kansas City, Kansas Beaumont, Texas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Topeka, Kansas Kingfisher, Oklahoma Corvallis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Stillwater, Oklahoma Corvallis, Oregon
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home Knauss, E. J., 1905, Druggist Kooken, E. R., 1910, Farm Demonstrator. Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer. Krepps, Samuel Jackson, Jr., Civil Engineer Kolshorn, Agnes, 1913, Colorado Woman's College Lahman, Ruth Annie, 1914, at Home Lahman, Ruth Annie, 1914, at Home Lahman, C. R., 1907, Dredging Company, 108 Bond Street Lantz, C. R., 1907, Dredging Company, 108 Bond Street Lane, F. P., 1913, U. S. Farm Demonstrator Leicht, H. S., 1911, U. S. Geological Survey Leteer, C. R., 1908, U. S. Experiment Farmer Lewis, Arthur C., 1901, Entomologist Lewis, Carrie, 1905, at Home Lewis, Carrie, 1905, at Home Lincoln, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer Lovett, A. L., 1908, Assistant Entomologist Lovetl, A. L., 1908, Assistant Entomologist Lovell, Thomas J., 1912, Draftsman Southern California  Lowry, C. H., 1902, Lawyer Lowery, Ethel, 1913, at Home Lowman, E. F., 1912, Principal High School (Lossey) Barnes, Portia M., 1013, at Home	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Benham, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Stillwater, Oklahoma Pawnee, Oklahoma Pawnee, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Corvallis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Corvalis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Stillwater, Oklahoma Corvalis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Houston, Texas Pawhuska, Oklahoma
King, B. D., 1910, Civil Engineer. Kirkpatrick, Cecil, 1909, Professor of Domestic Science Kirkpatrick, Katie C., 1911, High School (Kirkpatrick) Anderson, —, 1910, at Home. Knauss, E. J., 1905, Druggist Kooken, E. R., 1910, Farm Demonstrator Knoblock, F. L., 1912, Architect Krall, J. A., 1913, Graduate Student, Iowa State College Kratka, Ralph, 1902, Farmer Krepps, Samuel Jackson, Jr., Civil Engineer Krobsorn, Agnes, 1913, Colorado Woman's College Lahman, Ruth Annie, 1914, at Home Lahman, W. L., 1909, Ice Manufacturer Lantz, C. R., 1907, Dredging Company, 108 Bond Street Lane, F. P., 1913, U. S. Farm Demonstrator. Leicht, H. S., 1911, U. S. Geological Survey Leteer, C. R., 1908, U. S. Experiment Farmer Lewis, Arthur C., 1901, Entomologist Lewis, Carrie, 1905, at Home Lincoln, H. J., 1903, A., T. & S. F. Ry. Co Lindsay, R. V., 1909, Farmer Lovett, A. L., 1908, Assistant Entomologist Lovell, Thomas J., 1912, Draftsman Southern California Lowry, C. H., 1902, Lawyer Lowry, Ethel, 1913, at Home (Lowry) McKee, Theo., 1906, at Home Lowry, Ethel, 1913, at Home (Lowry) McKee, Theo., 1906, at Home Lowry, Ethel, 1913, at Home Lowry, Ethel, 1913, at Home Lowren, E. F., 1912, Principal High School. (Losey) Barnes, Portia M., 1913, at Home Lown, H. W., 1912, Commonwealth-Edison Co	Wharton, Texas Chickasha, Oklahoma Newkirk, Oklahoma Guymon, Oklahoma Guymon, Oklahoma Guymon, Oklahoma Kansas City, Kansas Beaumont, Texas Ames, Iowa Rocky Ford, Colorado Cushing, Oklahoma Denver, Colorado Cushing, Oklahoma Pawnee, Oklahoma Astoria, Oregon Newton, Kansas Solodad, California San Antonio, Texas Atlanta, Georgia Stillwater, Oklahoma Tuscon, Arizona Stillwater, Oklahoma Tuscon, Kansas Kingfisher, Oklahoma Topeka, Kansas Kingfisher, Oklahoma Corvallis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Stillwater, Oklahoma Lorvallis, Oregon Edison Company Los Angeles, California Stillwater, Oklahoma Tucson, Arizona Chicago, Illinois

Malone, I. A., 1900, Pres. Sec. Agri. School	
	Warner Oklahoma
Marker, Walter, 1914 Dairy Instructor	Warner Oklahoma
Marple Vern 1904 Banker	Meade Oklahoma
March Venus Lee 1013 Teacher	Springfield Missouri
Mayoll S I 1011 Proifs Tel and Tel Co	Los Angeles Colifornia
Mana D F 1000 Engineer	T N Maria
Maltan W A 1012 Cananal Floatric Company	
Merion, W. A., 1913, General Electric Company	Lynn, Massachusetts
Merrin, A. J., 1915, Asst. Engineer American Coal Co	WcCombs, vvest Virginia
Merry, Geo., 1913, Chemist, Consumers Renning Company	Cushing, Oklahoma
Merrifield, E. R., 1913, Farmer and Teacher	Enid, Oklahoma
Merydith, C. S., 1912, Federal Agent	
Miller, Maud, 1903, at Home	Beeville, Texas
Miller, Bertha, 1906, at Home	Beeville, Texas
Miller, Ella Nora, 1914, at Home	Stillwater, Oklahoma
*Miller, L. C., 1900	
Miller, Hilma Viola, 1914, Instructor in Public Schools	Stillwater, Oklahoma
Miller, Esther Carolyn, 1914, Instructor in Public Schools	Stillwater, Oklahoma
Miltimore, Cora A., 1899, Librarian, Pacific University	Forest Grove Oregon
Mitchell L. C. 1909 Graduate Student	St Paul Minnesota
Mitschrich M 1013 Westinghouse Flectric Company	Wilkinghurg Penneylyania
Moote T P 1010 Engineer	FI Compo Tayas
Moore T A 1011 Western Milling Company	Vanana City Missouri
Moore, J. A., 1911, Western Mining Company	Wings City, Missouri
Moore, A. I., 1908, Bookstore	Kingnsner, Oklanoma
Moore, R. H., 1908, Real Estate	Stillwater, Oklahoma
Morgan, Bernice, 1904, Graduate Student	Stillwater, Oklahoma
Malone, J. A., 1900, Pres. Sec. Agri. School	Pullman, Washington
(Morrison) Berry, Edwina, 1907, at Home	Stillwater, Oklahoma
*Morrow, C. E., 1903	
(Morrow) Watkins, Jessie, 1903, at Home	Enid, Oklahoma
(Morrow) Hall, Ella May, 1914, at Home	Texarkana, Texas
Morrow Bertha Josephine, 1914, Teacher	Broken Arrow, Oklahoma
(Moskedoll) McArthur Olga 1911 at Home	Favetteville Arkansas
Myers S F 1800 Real Estate	Guthrie Oklahoma
Miyers, S. E., 1099, Real Estate	Gutilite, Oktalionia
Ma Arthur C I 1011 Restorial saist University of Arlenn	and Forestterille Arlennes
McArthui, C. L., 1911, Bacteriologist University of Arkan	sas Payetteville, Arkansas
McBride, Iva, 1910, Professor of Domestic Science	Douglas, Arizona
McIlvain, Chas., 1913, Farmer	Ponder, Texas
McBride, J. H. F., 1903, City Engineer	Lake City, South Carolina
McIntyre, J. C., 1911, Farmer	Boulder, Colorado
McLelland, Mathilde, 1914, at Home	New Orleans, Louisiana
McLelland, William, 1914, Farmer	East Point, Louisiana
McMullin, S. I., 1909, Lumber Business	Manchester, Oklahoma
McClure, Marguerite Schermerhorn, 1914, at Home	McAlester, Oklahoma
McKay, M. B., 1911, U. S. Department of Agriculture	Boulder, Colorado
McReynolds A B 1899 Publisher	Guadaloune California
McReynolds S A 1002 Music Teacher	Stillwater Oklahoma
Ma Phaetara Wm H 1000 Professor of Physics	College Station Toyas
MCF neeters, will. 11., 1909, 1101essor of Thysics	Conege Station, Texas
M. Diseases Months 1012 at Home	Chillman Olalahama
McPheeters, Martha, 1913, at Home.	Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home	Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma nceTishomingo, Oklahoma Two Harbors, Minnesota
McPheeters, Martha, 1913, at Home McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture McElroy, C. H., 1906, Assistant in Bacteriology	Stillwater, Oklahoma nceTishomingo, Oklahoma Two Harbors, Minnesota Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture. McElroy, C. H., 1906, Assistant in Bacteriology. McBride, J. F., 1904, Construction Engineer.	Stillwater, Oklahoma neeTishomingo, Oklahoma Two Harbors, Minnesota Stillwater, Oklahoma Center City, South Carolina
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma nceTishomingo, Oklahoma Two Harbors, Minnesota Stillwater, Oklahoma Center City, South Carolina Blooming Prairie, Minnesota
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture. McElroy, C. H., 1906, Assistant in Bacteriology. McBride, J. F., 1904, Construction Engineer. McCall, J. G., 1908, Instructor. McBride, J. D., 1911, Clerk.	Stillwater, Oklahoma nceTishomingo, Oklahoma Two Harbors, Minnesota Stillwater, Oklahoma Center City, South Carolina Blooming Prairie, Minnesota Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma nceTishomingo, OklahomaTwo Harbors, Minnesota Stillwater, Oklahoma Center City, South Carolina Blooming Prairie, Minnesota Stillwater, Oklahoma Salt Lake City, Utah
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma nceTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, MinnesotaStillwater, OklahomaSalt Lake City, Utah
Myers, S. E., 1899, Real Estate  McArthur, C. L., 1911, Bacteriologist University of Arkan McBride, Iva, 1910, Professor of Domestic Science	Stillwater, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, MinnesotaStillwater, Oklahoma Stillwater, OklahomaSalt Lake City, UtahPittsburgh, Pennsylvania
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma nceTishomingo, OklahomaTwo Harbors, Minnesota Stillwater, Oklahoma Center City. South Carolina Blooming Prairie, Minnesota Stillwater, Oklahoma Salt Lake City, UtahPittsburgh, Pennsylvania Corozal, C. Z., Panama
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma necTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, MinnesotaStillwater, OklahomaSalt Lake City, UtahPittsburgh, PennsylvaniaCorozal, C. Z., PanamaPerry, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma neeTishomingo, OklahomaTwo Harbors, Minnesota Stillwater, Oklahoma Center City. South Carolina Blooming Prairie, Minnesota Stillwater, Oklahoma Salt Lake City, UtabPittsburgh, PennsylvaniaCorozal, C. Z., Panama Perry, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma neeTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, MinnesotaStillwater, OklahomaSalt Lake City, UtahPittsburgh, PennsylvaniaCorozal, C. Z., PanamaPerry, Oklahoma risityColumbia, Missouri
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture. McElroy, C. H., 1906, Assistant in Bacteriology. McBride, J. F., 1904, Construction Engineer. McCall, J. G., 1908, Instructor. McBride, J. D., 1911, Clerk. McCaslin, W. W., 1912, Utah Light and Power Company. Needham, Ollie, 1909, Westinghouse Testing Department. Nellis, H. W., 1912, Isthmian Canal Commission. (Neilson) Taylor, Mary A., 1903, at Home. Neuman, Eleanor Henrictta, 1914, Student Missouri Unive Nelson, Cyrus, 1903, Physician. (Nelson) Chandler, Lila E., 1903, at Home.	Stillwater, Oklahoma neeTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, Minnesota Stillwater, Oklahoma Salt Lake City, UtahPittsburgh, PennsylvaniaCorozal, C. Z., Panama Perry, Oklahoma rsity Columbia, MissouriHouston, TexasWashington, D. C.
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma neeTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City. South Carolina Blooming Prairie, MinnesotaStillwater, Oklahoma Salt Lake City, UtabPittsburgh, PennsylvaniaCorozal, C. Z., PanamaPerry, OklahomaPerry, OklahomaHouston, TexasWashington, D. CWashington, D. CWashington, D. C.
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma necTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Blooming Prairie, Minnesota Stillwater, Oklahoma Salt Lake City, UtabPittsburgh, Pennsylvania Corozal, C. Z., PanamaPerry, Oklahoma rsity Columbia, MissouriHouston, Texas - Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C.
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, A. A., 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma neeTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, MinnesotaStillwater, Oklahoma Salt Lake City, UtahPittsburgh, PennsylvaniaCorozal, C. Z., PanamaPerry, Oklahoma rsity Columbia, MissouriHouston, TexasWashington, D. CWashington, D. CWashington, D. CWashington, D. CWashington, D. CWashington, D. COregonFargo, North Dakota
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma
McPheeters, Martha, 1913, at Home. McPheeters, A. A., 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma neeTishomingo, OklahomaTwo Harbors, MinnesotaStillwater, Oklahoma Center City, South Carolina Blooming Prairie, MinnesotaStillwater, Oklahoma Salt Lake City, UtahPittsburgh, PennsylvaniaCorozal, C. Z., PanamaPerry, OklahomaPerry, Oklahoma rsity Columbia, MissouriHouston, TexasWashington, D. CWashington, D. CWashingt
McPheeters, Martha, 1913, at Home. McPheeters, Marguerite, 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture	Stillwater, Oklahoma
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
Nellis, H. W., 1912, Isthmian Canal Commission	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington
McPheeters, Martha, 1913, at Home.  McPheeters, A. A., 1912, Professor of Domestic Scie McPheeters, A. A., 1912, Professor of Agriculture.  McElroy, C. H., 1906, Assistant in Bacteriology.  McBride, J. F., 1904, Construction Engineer.  McBride, J. D., 1911, Clerk.  McCall, J. G., 1908, Instructor.  McCall, J. G., 1911, Clerk.  McCaslin, W. W., 1912, Utah Light and Power Company.  Needham, Ollie, 1909, Westinghouse Testing Department.  Nellis, H. W., 1912, Isthmian Canal Commission.  (Neilson) Taylor, Mary A., 1903, at Home.  Neuman, Eleanor Henrictta, 1914, Student Missouri Unive Nelson, Cyrus, 1903, Physician.  (Nelson) Cryus, 1903, Physician.  (Nelson) Chandler, Lila E., 1903, at Home.  Nelson, Stella, 1903, Druggist.  Nelson, J. A., 1905, Druggist.  Nelson, J. A., 1905, Druggist.  Newmann, Iva E., 1912, at Home.  Newmann, Iva E., 1912, at Home.  Newmann, Leo M., 1910, Surveyor.  North, Kate, 1912, Instructor in High School.  Newmann, Leo M., 1910, Surveyor.  North, Kate, 1912, Instructor Domestic Science, High Schoolms, John, 1906, U. S. War Department.  (O'Brien, G. E., 1913, State Board of Agriculture.  Olentine, Fred B., 1906, Head of Surgical Hospital  Osborn, John, 1906, U. S. War Department.  (Osebman) Ross, Hattie, 1907, at Home  Oursler, Anna L., 1914, Teacher	Corozal, C. Z., Panama Perry, Oklahoma rsity Columbia, Missouri Houston, Texas "Washington, D. C. Washington, D. C. Washington, D. C. Washington, D. C. Oregon Fargo, North Dakota Wren, Washington

<sup>\*</sup>Deceased.

Ochman Maude 1012 Teacher	Nowata Oklahoma
Ostrinan, Madde, 1712, Teacher	Chill-maker Oklahoma
Oschman, Maude, 1912, Teacher	Old I City Oldelena
Oursier, A. C., 1910, Creamery Business	Oklanoma City, Oklanoma
Painter, Ray H., 1912, Instructor of Entomology Payne, L. F., 1912, Professor in Poultry Department Pearson, Thirza, 1913, Teacher. Peck, O. T., 1908, Merchant. Peck, C. P., 1914, Merchant. Pochall, R. A., 1910, Instructor in Civil Engineering. Potts, F. M., 1912, Farmer. Priest, Stella, 1912, Teacher. Pigg, H. F., 1902, Electrical Engineer.	Stillwater Oklahoma
Payme I E 1012 Professor in Poultry Department	Ambaret Massachusetts
Payne, L. F., 1912, Professor in Pountry Department	C. I. I. Massachusetts
Pearson, Thirza, 1913, Teacher.	Sulphur, Oklahoma
Peck, O. T., 1908, Merchant	Stillwater, Oklahoma
Peck. C. P., 1914. Merchant.	Stillwater, Oklahoma
Pochall R A. 1910 Instructor in Civil Engineering	Lafavette, Indiana
Potts F M 1012 Farmer	Devter Michigan
Dulas Calla 1012 Tanker	Oleanah Oldahama
Friest, Stella, 1912, Teacher	Okeman, Okianoma
Pigg, H. F., 1902, Electrical Engineer	Mineville, New York
Pataliff I A 1007 Assistant Agranamist Ilni of Nahr	calca Lincoln Nahracka
Ratchil, J. A., 1997, Assistant Agronomist, One. of Neor	askaDilicolli, Ivebiaska
Rector, F. L., 1902, Bacteriologist, Great Bear Water Co.	Brooklyn, New York
Reed, Fred A., 1911, Oklahoma Gas and Electric Company	yOklahoma City, Oklahoma
Reeve. C. T., 1907. Switchman	
Reeve H W 1907 Farmer	Choctaw, Oklahoma
*Regnier C F 1800	, , , , , , , , , , , , , , , , , , , ,
Daid Crass 1012 Instructor in Domestic Science	Houston Town
Reid, Grace, 1913, Instructor in Domestic Science	mouston, lexas
Richards, Hattie, 1912, Instructor in High School	Brigham City, Utah
Ratcliff, J. A., 1907, Assistant Agronomist, Uni. of Nebr Rector, F. L., 1902, Bacteriologist, Great Bear Water Co. Reed, Fred A., 1911, Oklahoma Gas and Electric Company Reeve, C. T., 1907, Switchman Reeve, H. W., 1907, Farmer  *Regnier, C. E., 1899 Reid, Grace, 1913, Instructor in Domestic Science. Richards, Hattie, 1912, Instructor in High School. Ritter, L. B., 1910, at Home. Regnier, M. A., 1911, Instructor in High School. Reynolds, Oris Harold, 1914, Graduate Student. Rhodes, T. W., 1913, General Electric Company. Rockey, Nellie, 1914, Instructor, A. and M. College. Robinson, A. G., 1903, Assayer. Roeser, Harry Mance, 1914, Bureau of Standards. Ross, Sam I., 1911, Instructor in Manual Training. (Rogers) Faulds, Almira, 1910, Farmer. (Ruble) Warren, Bertha, 1903, at Home. Rudd, E. L., 1912, Western Electric Co. Rush, W. S., 1905, Marine Engineer. Russell, Carl, 1914, Instructor in Agriculture. Ryno, Madeline, 1913, Teacher.	Cold Springs, Oklahoma
Regnier M. A. 1911 Instructor in High School	Los Angeles, California
Reynolds Oris Harold 1014 Craduate Student	Springfold Missouri
Reynolds, Oris fiarold, 1914, Graduate Student	
Khodes, I. W., 1913, General Electric Company	Schenectady, New York
Rockey, Nellie, 1914, Instructor, A. and M. College	Stillwater, Oklahoma
Robinson, A. G., 1903, Assayer	Tecona, California
Roscar Harry Mance 1014 Rureau of Standards	Washington D C
Pose Com I 1011 Instruction of Standards	Fort Collins Colored
Ross, Sam I., 1911, Instructor in Manual Training	Fort Collins, Colorado
(Rogers) Faulds, Almira, 1910, Farmer	Enid, Oklahoma
(Ruble) Warren, Bertha, 1903, at Home	Ada, Oklahoma
Rudd F. L. 1912 Western Electric Co.	Chicago Illinois
Duck W. S. 1005 Marine Engineer	Now Vorle City New York
Rush, W. S., 1905, Marine Engineer	New Tolk City, New Tolk
Russell, Carl, 1914, Instructor in Agriculture	Helena, Oklahoma
Ryno, Madeline, 1913, Teacher	Stillwater, Oklahoma
Santee, L. A., 1913, Lumberman	Goltry. Oklahoma
Schwark C W 1914 Dairyman	Canon City Colorado
Shier F F 1017	Canon City, Colorado
Cooper F F 1012 Frames	C Ol-l-b
Seeger, E. E., 1913, Farmer	Gage, Oklahoma
Seeger, E. E., 1913, Farmer	Gage, Oklahoma Tishomingo, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma
Seeger, E. E., 1913, Farmer	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka Oklahoma
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively R. Roy 1902 Professor of Chemistry Pittsburgh	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh,	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University Pittsburgh, Pennsylyania
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer. Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University. Pittsburgh, Pennsylvania Chickasha, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer. Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home	
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh. Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurt C. 1911, U.S. Geological Survey.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Litsburgh, Pennsylvania Chickasha, Oklahoma Chickasha, Oklahoma Stillwater, Oklahoma Harrisburg, West Virginia
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh. Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home. Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Liniversity. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home. Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shaw, Anna M., 1914, Teacher. Shiflett Riley Francis, 1914, Farmer.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma University. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma, Oklahoma Tishomingo, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher Shiffett, Riley Francis, 1914, Farmer Short, Robert, 1013, Agriculturies	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home. Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shallenberger, Marvin, 1912, Teacher. Shiflett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma University. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma City, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Booken Arrow, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher Shively, R. Rex, 1902, Professor of Chemistry	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home. Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shallenberger, Marvin, 1912, Teacher. Shiflett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist. Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma City, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Broken Arrow, Oklahoma Pittsburgh, Pennsylvania Beaumont, Texas
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher Shively, R. Rex, 1902, Professor of Chemistry Shively, R. Rex, 1902, Professor of Chemistry Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shalenberger, Marvin, 1912, Teacher. Shay, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Faimer. Short, Robert, 1913, Agriculturist. Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect. Schwark, C., 1914, Dairyman. Shiflett H. D., 1913, Farmer.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Harrisburgh, Pennsylvania Beaumont, Texas Canon City, Colorado
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Short, Robert, 1913, Agriculturist Shively, R. Rex, 1902, Professor of Chemistry Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman Shiflett, H. D., 1913, Farmer Smeltzer C. F. 1902, Rush Medical College	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Seenke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shallenberger, Marvin, 1912, Teacher. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Faimer. Short, Robert, 1913, Agriculturist Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect. Schwark, C., 1914, Dairyman. Shiflett, H. D., 1913, Farmer. Smeltzer, C. E., 1902, Rush Medical College.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma City, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Fitsburgh, Pennsylvania Broken Arrow, Oklahoma Pittsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Illinois
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Short, Robert, 1913, Agriculturist Shively, R. Rex, 1902, Professor of Chemistry Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman Shiflett, H. D., 1913, Farmer Smeltzer, C. E., 1902, Rush Medical College Smith, C. Ray, 1910, Real Estate	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer. Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman. Shiflett, H. D., 1913, Farmer Smeltzer, C. E., 1902, Rush Medical College. Smith, C. Ray, 1910, Real Estate Smith, R. R., 1913, Student Harvard University.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Liniversity. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma City, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Fittsburgh, Pennsylvania Pittsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Illinois Stillwater, Oklahoma
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist. Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect. Schwark, C., 1914, Dairyman. Shiflett, H. D., 1913, Farmer. Smeltzer, C. E., 1902, Rush Medical College Smith, C. Ray, 1910, Real Estate Smith, S. G., 1906.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Okemak, Oklahoma Okemak, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Pittsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Illinois Stillwater, Oklahoma Cambridge, Massachusetts
Seeger, E. E., 1913, Farmer. Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music. Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semke) Harrington, Grace E., 1906, at Home. Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shaw, Anna M., 1914, Teacher. Shiflett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman Shiflett, H. D., 1913, Farmer. Smeltzer, C. E., 1902, Rush Medical College. Smith, C. Ray, 1910, Real Estate Smith, S. G., 1906 Smith, Iohn Graham, 1914, Real Fstate.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Liniversity. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Covington, Oklahoma Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma City, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Fittsburgh, Pennsylvania Broken Arrow, Oklahoma Pittsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Illinois Stillwater, Oklahoma Cambridge, Massachusetts
Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate. Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home. Schreiber, S. C., 1913, Fruit Farmer. Schnurr, C., 1911, U. S. Geological Survey. (Semike) Harrington, Grace E., 1906, at Home. Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher. Shaw, Anna M., 1914, Teacher. Shiffett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist. Shively, R. Rex, 1902, Professor of Chemistry. Simank, Edmond William, 1914, Architect. Schwark, C., 1914, Dairyman. Shiflett, H. D., 1913, Farmer. Smeltzer, C. E., 1902, Rush Medical College Smith, C. Ray, 1910, Real Estate Smith, S. G., 1906.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Okemak, Oklahoma Okemak, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Broken Arrow, Oklahoma Pittsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Illinois Stillwater, Oklahoma Cambridge, Massachusetts Chickasha, Oklahoma
Ryno, Madeline, 1913, Teacher	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma Atoka, Oklahoma Liniversity. Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Oklahoma City, Oklahoma Oklahoma City, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Fittsburgh, Pennsylvania Broken Arrow, Oklahoma Pittsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Illinois Stillwater, Oklahoma Cambridge, Massachusetts Chickasha, Oklahoma
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Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Short, Robert, 1913, Agriculturist. Shively, R. Rex, 1902, Professor of Chemistry Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman Shiflett, H. D., 1913, Farmer. Smeltzer, C. E., 1902, Rush Medical College Smith, C. Ray, 1910, Real Estate Smith, C. Ray, 1910, Real Estate Smith, S. G., 1916. Smith, John Graham, 1914, Real Estate Smith, John Graham, 1914, Real Estate Smith, John Graham, 1914, Real Estate Smith, J. G., 1911, Real Estate Snyder, Georgia, 1913, Teacher Spaulding, H. E., 1910, Graduate Student Yale Universit Spaulding, John, 1905, Banker Spohn, R. E., 1910, Commonwealth-Edison Company Springer, Mamie, 1909, Instructor in High School Stablins, R. R., 1909, Farmer.	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklakoma University Pittsburgh, Pennsylvania Chickasha, Oklahoma Cincinnati, Ohio Stillwater, Oklahoma Harrisburg, West Virginia Sacramento, California Covington, Oklahoma Okemak, Oklahoma Okemak, Oklahoma Tishomingo, Oklahoma Tishomingo, Oklahoma Fintsburgh, Pennsylvania Beaumont, Texas Canon City, Colorado Atoka, Oklahoma Chicago, Ilinois Stillwater, Oklahoma Cambridge, Massachusetts  Chickasha, Oklahoma Cambridge, Massachusetts  Chickasha, Oklahoma
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Seeger, E. E., 1913, Farmer Shaw, Anna M., 1914, Teacher Shiflett, Riley Francis, 1914, Farmer Shiflett, H. D., 1913, Farmer Shively, R. Rex, 1902, Professor of Chemistry Pittsburgh, Smith, John Graham, 1914, Real Estate Smith, Elwin Jeston, 1914, Conservatory of Music Spohn, Callie M., 1914, at Home Schreiber, S. C., 1913, Fruit Farmer Schnurr, C., 1911, U. S. Geological Survey (Semke) Harrington, Grace E., 1906, at Home Selement, F. G., 1910, Street Car Service. Shallenberger, Marvin, 1912, Teacher Shaw, Anna M., 1914, Teacher Shiffett, Riley Francis, 1914, Farmer. Short, Robert, 1913, Agriculturist Shively, R. Rex, 1902, Professor of Chemistry Simank, Edmond William, 1914, Architect Schwark, C., 1914, Dairyman. Shiffett, H. D., 1913, Farmer Smeltzer, C. E., 1902, Rush Medical College Smith, C. Ray, 1910, Real Estate Smith, S. G., 1910, Real Estate Smith, John Graham, 1914, Real Estate Smith, John Graham, 1914, Real Estate Smith, John Graham, 1914, Conservatory of Music Smith, J. G., 1911, Real Estate Smith, J. G., 1911, Real Estate Smyder, Georgia, 1913, Teacher Spaulding, H. E., 1910, Graduate Student Yale Universit Spaulding, H. E., 1910, Teacher Spohn, R. E., 1910, Farmer	Gage, Oklahoma Tishomingo, Oklahoma Griffin, Oklahoma Atoka, Oklahoma University

<sup>\*</sup>Deceased.

Stewart, F. L., 1909, Civil Engineer, Brang Oil Company. Stevens, H. L., 1904, Chemist, St. Louis Surface Paint Co. (Stewart) Jessee, Annabel, 1911, at Home	Tules Oklahoma
Stevens H I 1004 Chemist St Louis Surface Paint Co.	moany St Louis Missouri
(Stewart) Jacobs Annahal 1911 at Home	Supply Oklahoma
Spiedel H M 1010 Farmer	Springvale Oklahoma
Stiles G W 1900 Racteriologist Bureau of Chemistry I	I S Department of
Agriculture	Denver. Colorado
Stinson Chester Calhoun, 1914, Graduate Student	Ames. Iowa
Stover Nannie 1909 Teacher in High School	Cushing Oklahoma
(Stover) Gougler, Ida M., 1908, at Home	Manhattan, Kansas
Straub, Otto, 1910, Sunshine Dairy Company.	Indianapolis, Indiana
(Swope) Dolde, Emma H., 1898, at Home	Leavenworth, Kansas
Swope, H. M., 1913, A., T. & S. F., Engineering Departme	entTopeka, Kansas
Stevens, Mary, 1914, Teacher	Bisby, Texas
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Talbot, A. E., 1912, Graduate Student, University of Wisco	onsinMadison, Wisconsin
Talbot, Gertrude, 1913, Teacher	McAlester, Oklahoma
Talbot, Nora A., 1910, Teacher	Muskogee, Oklahoma
(Tankersley) McAninch, Lola M., 1900, Teacher	Stillwater, Oklahoma
Tate, J. A., 1909, Engineer	Stillwater, Oklahoma
Tarr, W. A., 1904, Professor of Geology	Columbia, Missouri
(Taylor) Ellis, Jeanette, 1907, at Home	Bisby, Texas
Tibbets, F. J., 1910, General Electric Company.	El Paso, Texas
Tillotson, A. K., 1912, Principal of High School	Haskell, Oklahoma
Tillotson, Bonnie, 1909, Nurse	.Mount Lebanon, Louisiana
Talbot, A. E., 1912, Graduate Student, University of Wiscomalbot, Gertrude, 1913, Teacher. Talbot, Nora A., 1910, Teacher. (Tankersley) McAninch, Lola M., 1900, Teacher. Tate, J. A., 1909, Engineer. Tarr, W. A., 1904, Professor of Geology. (Taylor) Ellis, Jeanette, 1907, at Home. Tibbets, F. J., 1910, General Electric Company. Tillotson, A. K., 1912, Principal of High School. Tillotson, Bonnie, 1909, Nurse. (Thatcher) Bost, Jessie O., 1897, at Home. Thornberry, W. T., 1902, Building Contractor. Thornberry, J. W., 1904, Buttermaker. Thompson, Eugene, Farmer. (Thoroughman) Williams, Maude, 1904, at Home. Trent, Dover, 1913, Superintendent City Schools. Treoux, C. P., 1911, Merchant. Tongue, G. F., 1912, Street Railway Company. Truman, H. L., 1913, General Electric Company. Tourtellotte, Evart, 1914, Instructor in High School.	Alva, Oklahoma
Thornberry, W. 1., 1902, Building Contractor	
Thornberry, J. W., 1904, Buttermaker	Astoria, Oregon
(Theorem Williams Manda 1004 of Hams	Deales Oblahama
Trent Dover 1012 Superintendent City Schools	Stigler Oklahoma
Trent, Dover, 1913, Superintendent City Schools	Chicago Illinois
Tongue G F 1012 Street Railway Company	Dallac Tayas
Trumon H I 1013 Coneral Flectric Company	New Vorle City New Vorle
Tourtellotte Fyort 1914 Instructor in High School	Plymouth Wisconsin
Tourtenotte, Dvart, 1914, Instructor in Tight School	iy mouth, wisconsin
Utt, O. G., 1913, Westinghouse Testing Department, (	Care Brasher StreetPittsburgh, Pennsylvania
Vance, Leon Robert, 1914, Teacher	Medford, Oklahoma Mineral Springs, Texas
Vance, Leon Robert, 1914, Teacher	Medford, Oklahoma Mineral Springs, Texas
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home	
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Eav. 1904, Teacher	Medford, Oklahoma Mineral Springs, Texas Oklahoma City, Oklahoma Fort Logan, Colorado Libertyrille, Illinois
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Elorgone, 1003, Civil Service	Medford, OklahomaMineral Springs, TexasOklahoma City, OklahomaFort Logan, ColoradoLibertyville, IllinoisWashington, D. C.
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Florence, 1903, Civil Service Walker, Veda 1906, Teacher	Medford, Oklahoma Mineral Springs, Texas Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home	
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Florence, 1903, Civil Service Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home *Walters, Julia, 1913	
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home.  *Walters, Julia, 1913. Walters, Marguerite P., 1910, Assistant Librarian	Medford, Oklahoma Mineral Springs, Texas Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home *Walters, Julia, 1913 Walters, Marguerite P., 1910, Assistant Librarian Walters, Minnie C., 1910, Professor of Domestic Science	Medford, Oklahoma Mineral Springs, Texas Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma McPherson, Kansas
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Florence, 1903, Civil Service Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home *Walters, Julia, 1913 Walters, Marguerite P., 1910, Assistant Librarian Walters, Minnie C., 1910, Professor of Domestic Science Watson, W. P., 1913, Morgan Engineering Company	
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Florence, 1903, Civil Service Walker, Florence, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home.  *Walters, Julia, 1913 Walters, Marguerite P., 1910, Assistant Librarian Walters, Minnie C., 1910, Professor of Domestic Science. Watson, W. P., 1913, Morgan Engineering Company Watson, D. H., 1911, U. S. Geological Survey.	Medford, Oklahoma Mineral Springs, Texas  Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma McPherson, Kansas Dayton, Ohio Phoenix, Arizona
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Fay, 1904, Teacher Walker, Forence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home *Walters, Julia, 1913 Walters, Marguerite P., 1910, Assistant Librarian Walters, Minnie C., 1910, Professor of Domestic Science Watson, W. P., 1913, Morgan Engineering Company Watson, D. H., 1911, U. S. Geological Survey Watrous, Robert C., 1910, Jeweler	Medford, Oklahoma Mineral Springs, Texas  Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma McPherson, Kansas Dayton, Ohio Phoenix, Arizona Cushirg, Oklahoma
Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Florence, 1903, Civil Service Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home  *Walters, Julia, 1913 Walters, Marguerite P., 1910, Assistant Librarian Walters, Minnie C., 1910, Professor of Domestic Science Watson, W. P., 1913, Morgan Engineering Company Watson, D. H., 1911, U. S. Geological Survey Watrous, Robert C., 1910, Jeweler Watson, Florence, 1913, at Home	Medford, Oklahoma Mineral Springs, Texas  Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma McPherson, Kansas Dayton, Ohio Phoenix, Arizona Cushirg, Oklahoma Lamberton, Minnesota
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Vance, Leon Robert, 1914, Teacher Vezey, E. E., 1910, Teacher  Walker, Belle, 1902, at Home Walker, Ethel, 1902, Teacher Walker, Florence, 1903, Civil Service Walker, Florence, 1903, Civil Service Walker, Veda, 1906, Teacher (Walker) Swinford, Velma, 1901, at Home *Walters, Julia, 1913 Walters, Marguerite P., 1910, Assistant Librarian Walters, Minnie C., 1910, Professor of Domestic Science Watson, W. P., 1913, Morgan Engineering Company Watson, D. H., 1911, U. S. Geological Survey. Watrous, Robert C., 1910, Jeweler Watson, Florence, 1913, at Home. Walker, L. E., 1914, at Home. Walker, L. E., 1914, at Home. Weaver, Earl, 1913, Professor in High School Watson, W. F., 1913, Agriculturist Webb, Leone Marguerite, 1914, Graduate Student. Webb, Howard Floyd, 1914, Bacteriologist, City Health D Webb, A. E., 1912, Professor of Agriculture Wells, F. E., 1913, Civil Engineer. White, H. H., 1913, Civil Engineer, A., H. & S. F. Ry. (Whitsside, A., 1913, Instructor High School Whitock, Ernest, 1914, Frincipal High School White, H. H., 1913, Civil Engineer, A., H. & S. F. Ry. (Whitsside, A., 1913, Instructor High School White, Pearl L., 1907, Stenographer. Wiley, R. C., 1905, Experiment Station Chemist Wilson, H. E., 1908, A., T. & S. F. Ry. Co Wikle, G. F., 1904, Master Mechanic and E. E., Hon Company. Wikle, J. H., 1911, General Electric Company Wills, Doris, 1910, Westinghouse Electric Company Wills, Doris, 1910, Westinghouse Electric Company Wills, Doris, 1910, Westinghouse	Medford, Oklahoma Mineral Springs, Texas  Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma McPherson, Kansas Dayton, Ohio Phoenix, Arizona Cushi'g, Oklahoma Lamberton, Minnesota Fort Worth, Texas Graceville, Minnesota Milaca, Minnesota Stillwater, Oklahoma Lamberton, Illinois Gepy Eye, Minnesota Arkansas City, Kansas Evanston, Illinois Co Poplar Bluff, Missouri Pine Bluff, Arkansas Wewoka, Oklahoma Manhattan, Kansas Chillicothe, Missouri volulu Rapid Transit Honolulu, Hawaii Schencetady, New York Pittsburgh, Pennsylvania Stillwater, Oklahoma
Vance, Leon Robert, 1914, Teacher.  Vezey, E. E., 1910, Teacher.  Walker, Belle, 1902, at Home. Walker, Fay, 1904, Teacher. Walker, Fay, 1904, Teacher. Walker, Florence, 1903, Civil Service. Walker, Veda, 1906, Teacher. (Walker) Swinford, Velma, 1901, at Home.  *Walters, Julia, 1913. Walters, Marguerite P., 1910, Assistant Librarian. Walters, Minnie C., 1910, Professor of Domestic Science. Watson, W. P., 1913, Morgan Engineering Company. Watson, D. H., 1911, U. S. Geological Survey. Watson, D. H., 1911, U. S. Geological Survey. Watson, Florence, 1913, at Home. Walker, L. E., 1914, at Home. Weaver, Earl, 1913, Professor in High School. Watson, W. E., 1913, Agriculturist. Webb, Leone Marguerite, 1914, Graduate Student. Webb, Howard Floyd, 1914, Bacteriologist, City Health D. Webb, A. E., 1912, Professor of Agriculture. Wells, F. E., 1913, Civil Engineer. Whipple, Arthur Floyd, 1914, Graduate Student. White, H. H., 1913, Civil Engineer. Whiteside, A., 1913, Instructor High School Whiteside, A., 1913, Instructor High School Whitlock, Ernest, 1914, Principal High School Whitlock, Ernest, 1914, Principal High School Wiar, Pearl L., 1907, Stenographer. Wiley, R. C., 1905, Experiment Station Chemist Wilson, H. E., 1908, A., T. & S. F. Ry. Co. Company Willes, Doris, 1910, Westinghouse Electric Company Williams, R. L., 1913, at Home. Williams, R. L., 1913, at Home.	Medford, Oklahoma Mineral Springs, Texas  Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma McPherson, Kansas Dayton, Ohio Phoenix, Arizona Cushir g, Oklahoma Lamberton, Minnesota Fort Worth, Texas Graceville, Minnesota Stillwater, Oklahoma Lamberton, Minnesota Stillwater, Oklahoma Lamberton, Minnesota Stillwater, Oklahoma Phoenix, Arizona Cushir g, Oklahoma Lamberton, Minnesota Fort Worth, Texas Graceville, Minnesota Stillwater, Oklahoma Pine Bluff, Missouri Pine Bluff, Arkansas Wewoka, Oklahoma Oklahoma City, Oklahoma Manhattan, Kansas Chillicothe, Missouri Olulu Rapid Transit Honolulu, Hawaii Schenectady, New York Pittsburgh, Pennsylvania Stillwater, Oklahoma Stillwater, Oklahoma Chicago, Illinois
Vance, Leon Robert, 1914, Teacher.  Vezey, E. E., 1910, Teacher.  Walker, Belle, 1902, at Home. Walker, Fay, 1904, Teacher. Walker, Fay, 1904, Teacher. Walker, Florence, 1903, Civil Service. Walker, Swinford, Velma, 1901, at Home.  "Walters, Julia, 1913. Walters, Marguerite P., 1910, Assistant Librarian. Walters, Minnie C., 1910, Professor of Domestic Science. Watson, W. P., 1913, Morgan Engineering Company. Watson, D. H., 1911, U. S. Geological Survey. Watson, D. H., 1911, U. S. Geological Survey. Watson, Florence, 1913, at Home. Walker, L. E., 1914, at Home. Walker, L. E., 1914, at Home. Weaver, Earl, 1913, Professor in High School. Watson, W. E., 1913, Agriculturist. Webb, Howard Floyd, 1914, Bacteriologist, City Health D. Webb, A. E., 1912, Professor of Agriculture. Wells, F. E., 1913, Civil Engineer, A., H. & S. F. Ry. (Whiteside, A., 1913, Instructor High School. White, H. H., 1913, Civil Engineer, A., H. & S. F. Ry. (Whiteside, A., 1913, Instructor High School. White, Ernest, 1944, Principal High School Wiar, Pearl L., 1907, Stenographer Wiley, R. C., 1905, Experiment Station Chemist. Wilson, H. E., 1908, A., T. & S. F. Ry. Co. Wikle, G. F., 1904, Master Mechanic and E. E., Hon Company. Wills, Doris, 1910, Westinghouse Electric Company. Willams, R. L., 1913, at Home. Williams, R. L., 1913, at Home. Williams, Guy P., 1910, Commonwealth-Edison Company. Willson, Clay E., 1911, Farmer and Teacher. Wilson, James, 1906, Assistant Bacteriologist N. Y. Expt.	Medford, Oklahoma Mineral Springs, Texas  Oklahoma City, Oklahoma Fort Logan, Colorado Libertyville, Illinois Washington, D. C. Berkeley, California Stillwater, Oklahoma Stillwater, Oklahoma McPherson, Kansas Dayton, Ohio Phoenix, Arizona Cushir g, Oklahoma Lamberton, Minnesota Fort Worth, Texas Graceville, Minnesota Milaca, Minnesota Stillwater, Oklahoma Department. Toledo, Ohio Sleepy Eye, Minnesota Arkansas City, Kansas Evanston, Illinois Co. Poplar Bluff, Missouri Pine Bluff, Pinesylvania Stillwater, Oklahoma Chicago, Illinois Stillwater, Oklahoma

<sup>&</sup>quot;Deceased.

Winters, N. E., 1911, Farm Superintendent	a a o a
Woodson, M. M., 1902, Farm Crop Reporter.  Woodworth, C. M., 1910, Graduate Student, Uni. of Wisconsin. Madison, Wisconsin. Woodworth, J. E., 1904, Federal Farm Statistician.  Worth, Gurtha May, 1914, Teacher.  Worthington, W. H., 1910, Case Threshing Mach. Co. Buenos Aires, South America, Wright, Louise, 1912, Teacher.  Wright, Louise, 1912, Teacher.  Wright, N. W., 1913, Teacher.  Wright, N. W., 1913, Teacher.  Wright, Louise, Astoria, Astoria, Oregon.	a n a a a
Young, Kenneth, 1914, Construction Engineer	.S

### ACCREDITED SCHOOLS

Students who have completed the course of study in accredited schools will be given credit at the A. and M. College according to the following schedule:

### LIST 1

Graduates from the following schools will be accepted as Freshmen without any conditions:

Ada	Guymon	Pauls Valley
Afton	Oklahoma Methodist	Panhandle School of
Altus	University Academy	Agriculture,
Anadarko	Guthrie	Goodwell
Arapaho	Hartshorne	Pawhuska
Ardmore	Haskell School of Ag-	Pawnee
Atoka	rigulture, Broken	Perry
Bartlesville	Arrow	Ponca City
Beaver	Hennessey	Pond Creek
Beggs	Henryetta	Porum
Blackwell	Hinton	Poteau
Boswell	Hobart	Pryor
Bristow	Holdenville	Purcell
Broken Arrow	Hollis	Ramona
Carmen	Hugo	Ryan
Chandler	Kiefer	Sallisaw
Checotah	Kingfisher College	Sapulpa
Cherokee	Academy, Kingfisher	Savre
Chelsea	Kingfisher	Seminole
Chickasha	Laurence Friends	Shawnee
Claremore (U. P. S.)	Academy, Gate	Skiatook
Cleveland	Lawton	Snyder
Clinton	Lexington	Stigler
Coalgate	Lindsay	Stillwater
Collinsville	McAlester	Stilwell
Copan	McLoud	Sulphur
Cordell Christian	Madill	Tecumseh
College	Mangum	Temple
Cordell	Marietta	Thomas
Cushing	Marlow	Tishomingo
Custer City	Marshall	Tonkawa (U. P. S.)
Dewey	Medford	Tulsa
Duncan	Miami	Henry Kendall Col-
Eldorado	Muldrow	lege, Tulsa
Elk City	Murray School of	Vinita
El Reno	Agriculture	Wagoner
Enid	Tishomingo	Walter
Eufaula	Muskogee	Wapanucka
Phillips University	Mountain View	Watonga
Academy, Enid	Newkirk	Waurika
Fairfax	Noble	Waynoka
Fairview	Norman	Welch
Frederick	Nowata	Weleetka
Geary	Okemah	Wilburton
Granite	Oklahoma City	Woodward
Guthrie	Okmulgee	Wynnewood
	Oktaha	vv y in ite wood
	Ontalla .	

### LIST 2

Graduates from the following schools will be admitted as Freshmen, but conditioned in from  $\frac{1}{2}$  to 3 units of work:

Apache	Haileyville	Olustee
Broken Bow	Idabel	Quinton
Carnegie	Kaw City	Randlett
Coweta	Keota	Spiro
Devol	Kiefer	Stroud
Durant	Kingston	Texhoma
Davis	Kiowa	Tyrone
Erick	.Konawa	Vian
Gage	Lone Wolf	Waukomis
Grandfield	Okfuskee County High	Wetumka
Grove	School, Paden	Yukon

### LIST 3

Graduates from the following schools will be given 8 to  $11\frac{1}{2}$  credits. Necessary work for additional credits may be taken in the Secondary School at the A. and M. College:

Adair	Gotebo	Morris
Alva	Harrah	Mounds
Bixby	Haskell	Prague
Britton	Heavener	Red Oak
Byars	Ingersoll	Shattuck
Canadian	Jenks	Tupelo
Dale	Kiowa	Valliant
Fallis	Krebs	Wewoka
Forgan	Lambert	Wister
Gate	Mooreland	Yale

### LIST 4

Graduates from the following list of schools will be given from 4 to  $7\frac{1}{2}$  credits, and will be expected to make up the remainder of the necessary credits in the Secondary School of the A. and M. College:

Arnett	Delaware	Pittsburg
Boynton	Fallis	Quinlan
Braggs	Fort Gibson	Red Rock
Calvin	Gowan	Sparks
Capron	Howe	Stonewall
Choteau	Knowles	Terral
Council Hill	Lehigh	Texola
Crowder	Lenapah	Wainright
Dacoma	Ochelata	Webbers Falls
	Okarcha	

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DKLAHOMA A. & M. COLLEGE

CATALOG



# Oklahoma Agricultural & Mechanical College

1916 1917

STILLWATER, OKLAHOMA

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Diste No. et partials English Social Science (State kind of work dem) General History 1st year Ancient History Medieval History 2d year Modern History English History 3d year American History Okla, Hist. & Civics 4th year Civil Government Foreign Language (State kind of work done) U. S. Constitution Beginning Latin Caesar, books Economics . orations Cicero, ..... Sociology books Vingil, Beginning Greek Xenophon,.... books Vocational Subjects Homer, .... books (State kird of work done) Agriculture Beginning German Beginning French Drawing, Freehand Mathematics Object Algebra Advanced Algebra Plane Geometry Solid Geometry Trigonometry Domestic Art Adv. Arithmetic Natural Science Physiography Physics, Recitation Domestic Science Chemistry, Recitation Laboratory Astronomy

The items checked in the list above have been accepted for admission and aggregate

Botany, Recitation

Zoology, Recitation

Biology, Recitation

Physiology, Recitation Laboratory

Laboratory

Laboratory

Bookkeeping

Stenography

Typewriting

Commercial Law

Commercial Geography

Methods and Management

CATE	OF PI	REPARA	ATORY	WORK
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## OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

# ANNUAL CATALOG

1915-1916

WITH ANNOUNCEMENTS FOR 1916-1917

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STILLWATER, OKLAHOMA

# CHART OF OKLAHOMA A. & M. COLLEGE WORK

COMMERCE AND MARKETING VETERINARY MEDICINE SCHOOL OF EDUCATION 1. Complete Courses of In-

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officers, a group of fourteen brick and stone buildings, a more than a quarter of a million, and 1,000 acres of land. \$89,749.00

consists of 110 teachers and

science equipment costing Total value of buildings,

The College, after twenty-five years of development,

Agricultural Experiment Station tests and free publications. Lectures at Farmers' Institutes and other meetings.

Lectures at Teachers' Normals and Institutes, and publishing special literature.

Organizing Boys' and Girls' Clubs at home for the study of Agriculture, Domestic Science and related subjects. Agricultural Extension under the terms of the Smith-Lever Act-the county agent work in Agriculture and Home Economics.

The Outside Work for the People of the State ....

## COLLEGE CALENDAR

#### First Semester

#### 1916

September 4, Monday—Examinations.

September 5 and 6, Tuesday and Wednesday—Registration.

September 7, Thursday—Classwork Begins.

November 20, Monday-Short Course in Agriculture Opens.

November 30, Thursday—Thanksgiving Day, a Holiday.

December 22, Friday-Christmas Holidays Begin.

#### 1917

January 3, Wednesday-Work of First Semester Resumes.

January 8, Monday—Farmers' Week Opens.

January 19, Friday-First Semester Closes.

#### Second Semester

January 22, Monday—Examinations.

January 23 and 24, Tuesday and Wednesday-Registration.

January 25, Thursday—Classwork Begins.

February 24, Saturday—Short Course in Agriculture Closes.

Easter Vacation Begins Friday Morning Before Easter Sunday and Closes Monday Morning After Easter.

May 20, Sunday—Baccalaureate Sermon.

May 25, Friday—Commencement Day; Second Semester Closes.

#### Summer Session

May 28, Monday—Summer Normal, College Credit and Business Training Courses Open.

July 28, Saturday—Summer Normal, College Credit and Business Training Courses Close.

(The Faculty reserves the right, without further notice, to modify any announcement made in this catalog if circumstances render such change necessary, and in any event will be bound by it for only the year following the date of publication.)

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CHARLES WORKMAN RAPP
(B. S., Oklahoma A. and M. College)
Graduate Student Assistant in Horticulture

CHARLES WALLACE CRAWFORD (B. S., Oklahoma A. and M. College) Graduate Student Assistant in Chemistry

PAUL FREDRICK ORR
(B. S., Oklahoma A. and M. College)
Graduate Student Assistant in Chemistry

#### Student Assistants

GLEN BRIGGS
Agronomy

WALTER GOE
Botany

ANNIE FRANCIS
Business Training

MAXIE CUMMINGS
Library

MAE GORDON Library

LOIS DAVIDSON Library

WALTER RAY MARSH Library

EARL LEROY SPENCER Library

JOE IRA DAVIS
Manual Training

JOHN WILLIAM BRIDGES (Diploma, Central State Normal, Oklahoma) Secondary School

FRED McCARREL
(Diploma, Central State Normal, Oklahoma)
Secondary School

## COLLEGE OFFICERS

JAMES WILLIAM CANTWELL
(A. B., A. M., Baylor University)
(A. B., Yale University)

President

EDGAR ELI BREWER
Foreman of Shops
Superintendent of Buildings

EDWARD JOHNSTON WESTBROOK Superintendent Printing Department

WALTER STEMMONS
(B. J., University of Missouri)

Editor of Publications

CHARLES ALFRED POFFENBERGER
(Houston Business University)
Registrar and Secretary to the Faculty

MONROE JOB OTEY
(B. S., Oklahoma A. and M. College)
Financial Secretary and Purchasing Agent

MYRTLE WILLARD TAYLOR
(Diploma, Oklahoma A. and M. College Business Department)

Assistant to the Registrar

EDWARD RANDLE PERDUE Secretary to the President

\*WILLIAM WIRT FOOTE
Librarian

MARGARET PEARL WALTERS
(B. S., Oklahoma A. and M. College)

Assistant Librarian

MRS. FREDERICK CHARLES KENT Matron

CHRISTIAN JENSEN
(Graduate, Biltmore School of Forestry)
Superintendent of Greenhouse and Landscape Gardener

WILLIAM MELVILLE HOWELL Assistant to the Financial Secretary

MARY ANGUS STORRIE
(H. A., College of Industrial Arts, Texas)
Stewardess, College Dining Hall

LAWRENCE FULLER KEITH
(B. S., Rhode Island State College)
Foreman, Poultry Plant

CHARLES DUDLEY SIMMONS
(M. D., Louisville Medical College)
(New York Postgraduate Medical School and Hospital)

College Physician

ELBERT WILLIAMS

Bookkeeper, Financial Secretary's Office

\*Resigned.
NOTE,—Officers listed in point of priority.

# AGRICULTURAL EXPERIMENT STATION STAFF

J. W. CANTWELL, A. M., President of the College
W. L. CARLYLE, M. S., Director
L. L. Lewis, M. S., D. V. M., Veterinarian
C. E. SANBORN, M. A., Entomologis
CHAS. K. FRANCIS, Ph. D., Chemis.
W. L. FOWLER, B. S. A., Animal Husbandman
M. A. BEESON, D. Sc., Agronomis
J. M. FULLER, B. S., Dairyman
F. M. Rolfs, Ph. D., Horticulturis
C. H. McElroy, B. S., Assistant Bacteriologis
H. R. PAINTER, B. S., Assistant Entomologis
LEONARD G. HERRON, B. S., Assistant Horticulturis
O. C. SMITH. A. M., Assistant Chemis.
D. A. SPENCER, B. S., Assistant Animal Husbandman
B. A. Ahrens, B. S., Poultryman
ADRIAN DAANE, M. S., Asistant Agronomis
WALLACE MACFARLANE, Ph. D., Assistant Agronomis
C. A. Burns, B. S., Assistant Dairyman
W. L. BLIZZARD, B. S., Assistant Animal Husbandman
D. G. Morgan, B. A., Assistant Chemist
CHARLES UNWIN, Creameryman
I. F. Riddell, Gardener
E. E. GRAHAM, B. S., Station Farmer
M. J. OTEY, B. S., Financial Secretary
Lula M. Tourtellotte Executive Clerk
LULU MITCHELL Mailing Clerk
MABLE BURNETT, Stenographer
MARY ATKINSON, B. S., Stenographer
ESTHER SHEPARD, Stenographer
ETHEL TRAVER, Stenographer
RHODA HOBSON, Stenographer
MARGARET RAY, Stenographer

# College Stenographers

TREVA BLACKWELL Engineering Department

CARRIE DUTCHER
College Publications and Commerce and Marketing Departments

\*MARIE DAVIS
Financial Secretary's Office

ROBERTA CANTWELL
President's Office

<sup>\*</sup>Resigned.

#### EXTENSION DIVISION STAFF

WALTER DIMMITT BENTLEY
Director of Extension and State Agent

JAMES ALEXANDER WILSON
(B. S. A., University of Minnesota)
Assistant Director of Extension and Assistant State Agent

EMMA ALVERNON CHANDLER
(B. S., Oklahoma A. and M. College)

Assistant State Agent in Charge of Home Demonstration Work

JOHN EARL SWAIM
Assistant State Agent in Charge of Boys' Clubs

DIXIE BOHON TUCKER
(A. B., Millersburg Academy)
(M. D., Bennett Medical College)
Specialist in Rural Sanitation

GEORGE WILSON
(Diploma, Central State Normal, Oklahoma)
Professor of Agriculture for Schools

D. C. HANAWALT, D. V. S., Specialist in Hog Cholera Work, Bureau of Animal Industry, Washington, D. C.

THOMAS WESLEY MOSELEY
(M. S., University of Nebraska)

Specialist in Dairying from Bureau of Animal Industry, Washington, D. C.
CHARLES LEONARD CHAMBERS

(B. S., Alabama Polytechnic Institute)
Specialist in Pig Club Work from Bureau of Animal Industry, Washington, D. C.

MARTHA RATCLIFFE McPHEETERS
(B. S., Oklahoma A. and M. College)
Assistant in Home Demonstration Work

RALPH TOBEY HEMPHILL
Special Assistant in Office Field Work

HARRY EMBLETON

(B. S., Cornell University)

Specialist in Poultry Husbandry from Bureau of Animal Industry, Washington, D. C.

WILLIAM JOHN GREEN
(B. S., Oklahoma A. and M. College)
Assistant in Movable Schools

HARRIET LETHE MORROW
Secretary and Office Manager of Extension Division

IRA BIDWELL SHERMAN
Office Assistant

SARAH RUTH SHARP

Mailing Clerk

XERA RUTH WHITE Civil Service Stenographer

MINNIE McCOY Stenographer

## District Agents

J. M. DAILY Muskogee, Oklahoma

F. F. FERGUSON Lawton, Oklahoma

C. A. McNABB Oklahoma City, Oklahoma

> J. M. WHITE McAlester, Oklahoma

## County Agents

G. E. THOMAS Vinita, Craig County

B. E. DRAKE Sapulpa, Creek County

E. DICKERSON Pryor, Mayes County

S. L. JEFFORDS Muskogee, Muskogee County

H. M. WOLVERTON Nowata, Nowata County

E. BELCHER Okemah, Okfuskee County

E. B. SHOTWELL Okmulgee, Okmulgee County

M. T. MAUDLIN Pawhuska, Osage County

E. H. VINCENT Miami, Ottawa County

D. C. WARREN Pawnee, Pawnee County

G. W. VINCENT Claremore, Rogers County

J. H. HENDERSON Sallisaw, Sequoyah County

C. E. EARNHEART Tulsa, Tulsa County

B. T. LAWSON Wagoner, Wagoner County

A. A. POWELL Bartlesville, Washington County

J. A. DONNELLY Elk City, Beckham County

B. B. MOSTELLAR Anadarko, Caddo County

C. R. DONART Lawton, Comanche County S. B. JACKSON El Reno, Canadian County

J. E. LAWRENCE Norman, Cleveland County

O. C. COOPER Chickasha, Grady County

GEO. R. LEA Pauls Valley, Garvin County

F. D. WATSON Mangum, Greer County

J. M. VANDERSLICE Hollis, Harmon County

BEN CRAWFORD Altus, Jackson County

F. F. PARKER Hobart, Kiowa County

A. -G. GRAHAM Marietta, Love County

W. B. TUCKER Duncan, Stephens County

W. A. CONNER Frederick, Tillman County

B. F. BROWN (Col.)
Boley, Okfuskee County

W. E. FORRESTER Cherokee, Alfalfa County

J. F. NEWSOM Beaver, Beaver County

J. M. RAPP Watonga, Blaine County

W. J. BURKE Clinton, Custer County

D. T. MEEK Enid, Garfield County

J. R. THOMAS Medford, Grant County

R. C. SHIFLETT Kingfisher, Kingfisher County

> S. E. LAIRD Perry, Noble County

C. W. CALLERMAN Oklahoma City, Oklahoma County

> H. E. WILSON Stillwater, Payne County

B. M. JACKSON Guymon, Texas County

B. F. MARKLAND Woodward, Woodward County

J. L. HOWE Atoka, Atoka County

L. H. FASH Durant, Bryan County

J. A. WYATT Hugo, Choctaw County

W. T. YOAKUM Coalgate, Coal County

T. H. MOORE Stigler, Haskell County

L. E. STEWART Holdenville, Hughes County

J. F. NEELY Tishomingo, Johnston County

D. F. KRAUSE Wilburton, Latimer County

H. GARLAND Madill, Marshall County

R. C. BLOCKER Idabel, McCurtain County

F. L. ROUNSEVELL Checotah, McIntosh County

LOUIS BRANNIN McAlester, Pittsburg County

> J. B. HILL Ada, Pontotoc County

R. C. MOORE Shawnee, Pottawatomie County

ERNEST WHITLOCK Wewoka, Seminole County

# Women Agents

MISS IVA M. BURCH Bartlesville, Washington County

MISS ANNA L. DIEHL Okemah, Okfuskee County

MRS. C. E. EARNHEART Tulsa, Tulsa County

MRS. JENNIE FASII Durant, Bryan County

MRS. B. M. JACKSON Guymon, Panhandle

MRS. VIRDIE E. MOORE Shawnee, Pottawatomie County

MRS. L. A. MORSE Coalgate, Coal County

MRS. ANNIE PETERS (Col.)
Boley, Okfuskee County

MRS. MATTIE I. ROYSE Elk City, Beckham County

MRS. JOSIE C. SARTAIN Tahlequah, Cherokee County

MISS KATE SMITH Muskogee, Muskogee County

MRS. EUNICE M. BLOCKER Idabel, McCurtain County

MRS. NETTIE R. CORYELL Chickasha, Grady County

MRS. ALVIN ROBERTS DUVALL Oakman, Pontotoc County

MRS. IDA GIGRAY Hobart, Kiowa County

MISS MAY McSPADDEN Chelsea, Rogers County

MRS. EVA MAY MOSTELLAR Anadarko, Caddo County

MRS. OLLIE M. NIPPER Chandler, Lincoln County

MISS FRANCES LOUISE REED Okmulgee, Okmulgee County

MRS. AUGUSTA NEWMAN SOUTHWICK Enid, Garfield County

#### Clerks

MRS. MATTIE MEADOWS
Lawton, Oklahoma
Clerk for District Agent

MISS CLARA VAN BUSKIRK Oklahoma City, Oklahoma Clerk for District Agent

> W. E. CLEAVER McAlester, Oklahoma Clerk for District Agent

## COLLEGE CADET CORPS

GEORGE W. EWELL First Lieutenant, Third Infantry Commandant of Cadets

M. McDONALD Sergeant Major, United States Army, Retired Assistant Commandant of Cadets

# Regimental Staff

GLEN BRIGGS
Captain and Regimental Adjutant

JEFF CAMPBELL Regimental Sergeant Major

J. W. PIERSON Regimental Color Sergeant

JAMES SCRIVNER
Regimental Color Sergeant

# Regimental Band

BOH. MAKOVSKY
(Head of Music Department)

Leader

CALVIN McKEE
Chief Musician

W. J. GREEN
Principal Musician

R. T. ABERCROMBIE Drum Major

W. R. MARSH Sergeant

C. E. BREWER
Sergeant

J. J. CANFIELD Sergeant

CHESTER KENWORTHY
Sergeant

W. E. BARNEY
Sergeant

A. I. PATTERSON
Sergeant

C. M. TUCKER
Sergeant

K. DICKSON Sergeant

C. G. JONES
Sergeant

# First Battalion

Major, Emory Williamson

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SECOND LIEUTENAL	NT AND	BATTALION	ADJUTANT,	, A.	W. VANO	Œ

DECORD ELECTERANT AND DISTINLION TIDIOTINIS, III VI. VIII OZ						
	COMPANY A	COMPANY B				
Captain	RUSSELL SCRIVNER	J. M. WILSON				
First Lieutenant		A. E. FORSYTHE				
Second Lieutenant	P. C. HOGGARD	V. E. CALDWELL				
First Sergeant	I. N. WHITFORD	E. R. FRENCH				
Sergeants	W. A. OWSLEY	H. E. DUNLAVEY				
	H. M. GARLOCE C. E. MURRAY	OSCAR MCNEELEY HENRY CLAY				
	E. BUDDRUS	HENRI CLAI				
Corporals	M. Dougla;	BRYAN STANLEY				
* *	F. M. Kutis	CHAS. ROBINSON				
	GEORGE ROSS M. R. HAYMES	FLOYD CARLSON Ross Wiley				
	A. WALLINGFORD	W. E. BLAZIER				
		RALPH CANFIELD				
	COMPANY C	COMPANY D				
Captain	J. A. BLACK	PAUL L. HEILMAN				
First Lieutenant		W. J. MASON				
Second Lieutenant	WILL BECK	W. B. Robinson				
First Sergeant	VIRGIL RHINEHART	OTIS REED				
Sergeants	J. A. KIMBELL	HAROLD JANEWAY				
	B. B. Nelson Emory Shirley	F. L. BEVER FLOYD BILYEU				
	E. McTaggart	R. F. AHERN				
Corporals	HENRY BURNHAM	GRADY STRINGER				
	E. M. PUTNEY	NORRIS HARP				
	J. B. KIBLER M. R. BRYANT	L. L. COLEMAN L. F. LESLIE				
	EARL RUTTER	S. M. GODFREY				
	M. R. WOMBLE	DREW WATKINS				
Second Battalion						
	MATOR TOP I PORINSON					

Major, Joe L. Robinson

SECOND LIEUTENANT AND BATTALION ADJUTANT, C. P. WHEELER

Date Line		, 0, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
	COMPANY E	COMPANY F
Captain	J. H. Scott	Myron Andrews
First Lieutenant	WAYNE HORTON	ALDEN LOOMIS
Second Lieutenant	G. V. MITCHELL	G. W. WHITTENBERG
First Sergeant	CLARENCE EMMONS	ELRO MATHIEU
Sergeants	GEO. BANDELIER J. B. COFFMAN FLOYD KELLER MERRILL CASH	GLENN WATSON MYRON MARX R. B. BARR HERMAN CLOUGHLEY
Corporals	OTTO HATCHER T. B. PATRICK CLAUDE ROUSE N. M. MINOR M. N. WALKER WALTER WEAVER	HAROLD WITTE RAY E. SKINNER J. J. MCKENNON J. B. HURST
	COMPANY G	COMPANY H
Captain	H. B. HILDEBRAND	G. W. THOMPSON
First Lieutenant	HAROLD NAYLOR	G. L. GLOECKNER
Second Lieutenant	ROY L. ANDERSON	D. F. COOLEY
First Sergeant	E. B. HILDEBRAND	C. E. McElroy
Sergeants	R. N. MATHEWS HARRY RANSOM A. L. SMITH HARLIN CHEVRONT	D. M. ORR V. J. BOOTH H. H. FINNELL ARTHUR ELLIS
Corporals	F. W. POWELL CARL REICHMAN P. A. WILBUR GLENN DILL IVAN SOUTHWICK H. B. BINGHAM	R. T. WEBB WAYNE WOODRUFF H. E. JENKINS WILLIE SMITH CECIL DIXON HENRY MURPHY

## STANDING COMMITTEES OF THE FACULTY

ENTRANCE

GUNDERSON, Chairman; MARONEY, BOWERS, ROCKEY, BROEMEL

DISCIPLINE

MARONEY, Chairman; KEMP, BEESON.

TEXTBOOKS

RAIFORD, Chairman; JABLOW, MICHAELS.

GRADES AND REPORTS

GUNDERSON, Chairman; CHAMBERS, BIGGIN.

ASSIGNMENT TO ROOMS

BEESON, Chairman; OVERSTREET, KUNZE

STUDENT PLAYS AND SOCIAL ENTERTAINMENTS MOORHOUSE, Chairman; ARNOLD, MISS MILLER

COURSES OF STUDY

BOYD, Chairman; DEANS OF SCHOOLS.

LITERARY SOCIETIES

FREEMAN MILLER, Chairman; KUNZE, HICKS.

CATALOG AND COLLEGE PUBLICATIONS STEMMONS, Chairman; HEADS OF DEPARTMENTS

SCHEDULE

LANE, Chairman; SHULER, FRANCIS.

DINING HALL SUPPLIES

Doering, Chairman; Storrie, Otey.

STUDENT LABOR

BOYD. Chairman: HARTSOCK, LEWIS.

ATHLETIC COUNCIL

LEWIS, Chairman; GALLAGHER, MOORHOUSE.

AFFILIATED SCHOOLS

BOWERS, Chairman; SWAIM, WILSON.

LIBRARY

HARTSOCK, Chairman; CARLYLE, CHAMBERS, MOORHOUSE.

RULES AND REGULATIONS

EWELL, Chairman; MARONEY, MOORHOUSE.

ASSIGNMENT TO CLASSES

FRANCIS, Chairman; ROCKEY, FREEMAN MILLER.

GRADUATE COURSES SANBORN, Chairman; Bowers, Francis, Gunderson.

AGRICULTURAL PUBLICATIONS

CARLYLE, Chairman; BENTLEY, PRESIDENT.

ROOMING AND BOARDING HOUSES

SANBORN, Chairman: FOWLER, DAANE.

# OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

The Oklahoma Agricultural and Mechanical College is a State and Federal institution of higher and broader learning, offering technical, scientific education to white persons 14 years of age and over, and carrying valuable scientific information to many thousands who can never visit or attend a college.

The service rendered by the A. and M. College to the State is three-fold:

(1) To educate and train in all that relates to applied science, the industries and citizenship, by affording both liberal and technical studies, laboratories, shops and fields for development of character, the mind and industrial efficiency—the College proper.

The A. and M. College consists of seven schools comprising thirty departments. These schools offer distinct courses of instruction to those applying for graduation. The Schools of Agriculture, Engineering, Home Economics, Science and Literature, Education and Commerce and Marketing offer the degree Bachelor of Science (B. S.) to graduates, and Master of Science (M. S.) to those completing a postgraduate course. The degree of Doctor of Veterinary Medicine (D. V. M.) is offered to those completing the course in Veterinary Medicine.

- (2) To carry forward investigations in agriculture of a research or experimental nature, to learn and disseminate new facts of importance to farmers and the youth of the State—the Agricultural Experiment Station.
- (3) To instruct citizens of the State, who are not residents at the College, and their families, in the best proven methods of

economic agriculture and domestic science—the Extension Division.

Tuition is free in all courses and departments. The College is supported by the Federal Government and by the State of Oklahoma as a part of the free school system.

## LAWS CONCERNING THE COLLEGE

The A. and M. College owes its origin to a bill offered by U. S. Senator Morrill of Vermont in 1862, which provided funds for one such institution of learning in every State of the Union, and set aside certain public lands from which endowments have come to each of these State and Federal Colleges. Therefore these institutions are known as "The Land Grant Colleges".

This Act of Congress, approved July 2, 1862, gave to each State which accepted its provisions 30,000 acres of Government land for each one of its Representatives in Congress, the proceeds to be applied to the endowment and maintenance of Colleges

"where the leading object shall be, without excluding the other scientific and classic studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts, . . . . in order to promote the liberal and practical education of the industrial classes in the various pursuits and professions of life."

Again, in 1887, Congress provided for an Agricultural Experiment Station in connection with each of the Land Grant Colleges:

"That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiments respecting the principles and application of agricultural science there shall be established under the direction of the College in each State or Territory, established . . . in accordance with an . . . 'Act donating public land to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts' . . . a department to be known and designated as an 'Agricultural Experiment Station'."

The First Legislature of the Territory of Oklahoma adopted a resolution assenting to and accepting the provisions of Congress and established the Oklahoma Agricultural and Mechanical Col lege in Payne County, at Stillwater, December 25, 1890.

Congress also provided 250,000 acres of public land as a permanent endowment for the College in the Enabling Act granting statehood to Oklahoma.

The Oklahoma Constitution provides that the State Board of Agriculture shall be the Board of Regents of the A. and M. College in the following:

"Said Board (of Agriculture) shall be maintained as a part of the State Government and shall have jurisdiction over all animal quarantine regulations and shall be the Board of Regents of all State Agricultural and Mechanical Colleges, . . ."

The Oklahoma Constitution is the only State Constitution recognizing the fundamental importance of agriculture and domestic science. It declares that—

"The Legislature shall provide for the teaching of agriculture, horticulture, stock feeding and domestic science in the common schools of the State."

According to the laws of Oklahoma "The Agricultural and Mechanical College shall be the technical head of the Agricultural, Industrial and allied Science system of education in Oklahoma".

#### SOURCES OF REVENUE

The Agricultural and Mechanical College derives support from both Federal and State Governments:

- 1. A fund derived from the United States Government that may be used for certain forms of class instruction in the College, known as the "Morrill Fund". This fund can be expended only for instruction of students in literature, languages, the sciences, and, by recent amendment, to prepare school teachers in the principles of agriculture and home economics.
- 2. The United States Government funds for investigation of scientific and agricultural matters of importance to farmers, and for publishing the results of such tests and experiments, known as the Hatch and Adams Funds. These support the Oklahoma Agricultural Experiment Station.
- 3. A fund derived from the rentals of public lands donated by Congress to the Oklahoma A. and M. College under the Enabling Act granting statehood to Oklahoma, known as the "Land Lease Fund". This fund may be used for operating expenses of the College proper.
- 4. A fund appropriated annually or biennially by the State for buildings, repairs and extensions to the permanent equipment of the A. and M. College.

5. The Smith-Lever Bill, adopted by the Sixty-Third Congress, provides increasing support for cooperative agricultural extension work for a period of ten years, when the permanent basis of this support is reached. This fund is dependent upon cooperative support by the State and is available only for agricultural extension work.

## INSTRUCTION FOR TEACHERS

The A. and M. College prepares teachers of science, of the industrial subjects and of related common branches.

The First State Legislature created the Chair of Agriculture for Schools in the A. and M. College,

"whose duty it shall be to direct and advise in all matters relating to the teaching of agriculture and allied subjects in the common schools, . . . He shall visit the schools, the teachers' institutes, the summer normal schools and the State Normal Schools, advise with the teachers and officers concerned . . . and shall distribute such leaflets and other literature as may be helpful to teachers and pupils concerned or engaged in teaching industrial, practical and scientific subjects."

## The law also states that:

"the Agricultural and Mechanical College, its President, professors and employes shall lend such assistance in carrying out the objects, aims and purposes of the State Constitution regarding the teaching of agriculture and allied practical subjects as shall not conflict with the immediate duties incumbent on them in said institution."

The School of Education.—To supply the State with trained teachers in industrial subjects, as contemplated by existing State laws, a School of Education is maintained.

Section 16, Article 14, of Chapter 219, Session Laws of 1913 as amended and approved April 1, 1915, says:

"After January, 1918, no person shall receive a third grade certificate unless he shall have had either academic training equivalent to one year in an approved high school of this State, or have had at least ten weeks' professional training in one of the Oklahoma State Normal Schools, State University or A. and M. College, or an institution in this State, or other State, having equivalent teachers' professional course; and no person shall receive a second grade certificate unless he shall have had either academic training equivalent to two years in an approved high school of this State, or have had at least twenty weeks' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or institution in this State or other States having equivalent teachers' professional course; and no person shall receive a first grade certificate unless he shall have had either academic training equivalent to three years in an approved high school of this State, or have had at least thirty-six weeks' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or an institution in this State or other State having equivalent teachers professional course."

The Summer Normal.—To further supply the demand in Oklahoma for trained teachers, the A. and M. College conducts

a complete summer normal institute for teachers. Members of the College Faculty are available as instructors, and specialists of note are also employed to assist in making the instruction of greatest value. Attendance upon the summer term assures full credit for training demanded under the School Law quoted above.

# LAND, BUILDINGS AND EQUIPMENT

The A. and M. College campus and farm embrace a tract of 1,000 acres.

The present buildings were erected by the State at a cost of \$529,716.86, and they are equipped with the latest and best appliances and scientific apparatus, representing an outlay by the State and Federal Governments of approximately \$300,000. All buildings are steam heated, electric lighted, and have sewer connections.

Engineering Building.—Erected 1912. Cost \$74,994.50. Three stories. Covers 160 by 80 feet. Reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories and boilerroom, the electrical laboratory, the civil engineering laboratories for testing cement, masonry and steel, rooms for surveying instruments, storage-batteries, standardizing room, men's locker room, and office. On the next floor are the engineering library, the physical laboratory and lecture room, four other lecture rooms for the various departments, and rooms for photometry, physical apparatus, stock and women's lockers. On the top floor are the quarters for the Department of Architectural Engineering, consisting of a lecture room, library and reading room and large drafting room. There are also on this floor four drafting and lecture rooms for the use of other departments, rooms for records and offices for instructors.

Shop Building.—Erected 1912. Cost \$4,420.00. Stone and brick building. Forty by 200 feet; for a depth of 80 feet it is two stories high, and the balance one story. Constructed mainly by student labor and of material from the old shop. Provides accommodations for the carpenter, machine and blacksmith shops and foundry, and has up-to-date toolrooms, etc., complete.

Heating Plant.—Erected 1912. Cost \$40,000.00. Furnishes heat and light for all College buildings and power for the shops.

Chapel Building.—Erected 1912. Cost \$84,075.28. Covers a ground area of 97 by 150 feet. Reinforced concrete and brick with stone trimmings. Sloping floor and large balcony. Roomy stage, with dressing rooms and accessories. Seating capacity 2,500.

Woman's Building.—Erected 1910. Cost \$62,000.00. Contains gymnasium, dining hall and kitchen, reception hall, parlor, classrooms for domestic science and domestic art, and living rooms for the accommodation of girl students. Rooms are electric lighted, steam heated, and all halls are equipped with lavatories and baths. The Dormitory is under supervision of a matron.

Boys' Dormitory.—Erected 1910. Cost \$25,000.00. Brick construction. Three stories. Equipped with all modern conveniences.

Chemistry Building.—Erected 1898. Cost \$12,000.00. Twostory brick structure with basement. Main portion 64 by 42 feet, wing 54 by 32 feet. Houses chemistry laboratory of the Experiment Station, classrooms and laboratories for instruction in agricultural and general chemistry.

Library Hall.—Erected 1901. Cost \$48,417.42. Brick and stone building, two stories and basement, 76 by 72 and 111 by 65 feet. It is used in addition to accommodation of library and reading rooms, for the Departments of Zoology and Veterinary Medicine, Drawing and Art Work, with lecture rooms, toilet rooms, etc., in the basement.

Central Building (the original building of A. and M. College).—Erected 1892. Cost \$25,000.00. Two-story brick and stone building with basement, 66 by 60 feet. Used for classrooms and printing plant.

Morrill Hall.—Erected 1906. Cost \$74,600.00. Three stories. Brick and stone construction, 76 by 166 feet. Named in honor of Senator Justin S. Morrill, by Act of the Legislative Assembly providing for its construction. Contains quarters for administration and business offices of the A. and M. College and Agricultu-

ral Experiment Station, and lecture rooms and laboratories for the Departments of Animal Husbandry, Horticulture, Botany and Entomology.

Dairy Building.—Erected 1904. Cost \$7,947.74. Brick structure of two stories, 60 by 30 feet, and one-story addition of 50 by 32 feet. Contains classrooms, laboratories, and a commercial creamery for experimental and instructional purposes.

Agronomy Building.—Erected 1906. Cost \$11,182.91. Twostory brick building. Soil and crop laboratories, classrooms, farm machinery laboratory, etc. Gymnasium occupies one wing of building.

Livestock Judging Pavilion.—Erected 1910. Cost \$15,239.93. Two-story brick structure, affording accommodations for study of the fine livestock owned by the College. Contains classrooms in addition to an amphitheater with a seating capacity of 500, and an arena 50 feet square.

Old Engineering Building.—Erected 1902. Cost \$8,000.00. Brick and stone structure of two stories and basement. Occupied by Departments of Music and Business Training.

Greenhouse.—Erected 1909. Cost \$5,000.00. Part of the equipment of Departments of Horticulture and Botany.

Poultry Plant.—Main building for laboratories and classrooms was built in 1913 and cost \$2,978.00. In addition the plant comprises more than a score of colony houses, a long laying house and a complete equipment.

Apiary and Insectary.—Erected 1913. Cost \$1,936.30. Houses laboratories for entomology and beekeeping. Cupola is fitted with modern insect trap to aid in study of winged insects.

Barns.—Brick barn, 60 by 96 feet, cost \$7,500.00; dairy barn, cost \$8,000.00; sheep barn, \$8,000.00; hog barn, \$1,000.00; veterinary barn, cost \$2,402.35.

# REQUIREMENTS FOR ADMISSION

All persons who desire to enter any School of the College should make application to the Registrar as early as possible before the opening of the first or second semester. Those who de-

sire to be admitted by certificate should make application as soon as possible after their graduation from the high school. To all applicants a blank will be furnished which they are expected to fill out and file with the Registrar in advance of entrance. This certificate must give in detail, concerning each subject which the applicant has studied in the school, the length of time in weeks, the number of recitations per week, and the grade or mark indicating his proficiency. Upon receipt of this certificate a permit to register will be sent the applicant by the Registrar in advance of his coming in September. This will greatly facilitate the work of entrance. The student will present this permit at the registration room and will not be compelled to wait his turn to meet the Entrance Committee.

# Degree Courses

Applicants for admission to the degree courses should be 16 years of age or over and of good moral character. They will be required to present 15 units of entrance credits for admission to the Freshman class. The 15 units required are distributed in the most advantageous way for admission to the various College courses in the Schools of Agriculture, Engineering, Home Economics, Science and Literature, Education, Commerce and Marketing, and Veterinary Medicine, as indicated in the table entitled "Prescribed Units for Admission". One who offers 14 such units will also be admitted as a Freshman, but will be conditioned in 1 unit. Such deficiency must be made up by the end of the second year that the student is in attendance.

	Agri- culture	Engin- eering	Home Econo- mics	Science and Liter- ature	Edu- cation	Com- merce and Mar- keting	Veter- inary Medi- cine
English	3	2½ 1½	3	3 1½	3	3	3
Plane Geometry Solid Geometry* *Science	1	1 1/2	1 I	1	1	1	1
** Foreign Language Social Science Inc. History	1	1	1	1	1	1	1
***Electives	7 8	71/2	7 8	71/2	7 8	7 8	7 8
Total	15	15	15	15	15	15	15

<sup>\*</sup>Physics required in Engineering and Science and Literature courses.
\*\*German or Latin required in Science and Literature course. German preferred in the Engineering course.

\*\*\*To make up the total of 15 units the applicant may use as electives any work satisfactorily completed in high school. A unit is defined to be the work done in an accredited high school or academy in five recitation periods a week for one school year.

#### Deficiencies

The courses in the Secondary School of the A. and M. College offered in connection with the College give every needed opportunity for students of the College to make up anything lacking in their preparation for entrance. All such entrance deficiencies must be made up by the end of the second year that the student is in attendance.

#### Advanced Credit

Applicants from other institutions of approved standing who offer collegiate courses or professional courses in excess of the requirements for admission will be assigned such advanced standing as may be determined by the Committee on Advanced Standing.

# Special Students

Persons of mature age who do not possess all the requirements for admission and are not candidates for a degree will be permitted to enter any of the courses in the different Schools upon giving satisfactory evidence to the Dean of that School that they are prepared to take advantageously the subjects which they desire. If they desire to take advanced subjects, such as are offered in the Junior and Senior years, they must show special preparation or special necessity for such courses. Persons applying for admission on the above basis are required to present a detailed statement of their preparatory work at the time of their admission.

# Secondary School of the A. and M. College

The minimum age limit is 14 years. Applicants for admission living in towns having high schools must be 16 years of age. Other applicants must pass a satisfactory examination in reading, spelling, penmanship, geography, United States history, grammar and arithmetic.

#### Business Course

Applicants for admission to the Business Course must have completed eighth grade subjects and be 18 years of age.

## REQUIREMENTS FOR GRADUATION

# Leading to Bachelor's Degree

In all of the four-year courses of study leading to a degree, a student must earn 134 credits, exclusive of any credits given for military science and physical training, before being eligible for a degree. A credit is one hour of theoretical work carried for one semester, two hours of laboratory work being equivalent to two-thirds of a credit. Students are expected, as a rule, to carry 16 hours' credit work per semester, but by special arrangement with adviser and Dean the number taken may be varied from 15 to 20 credits per semester.

# Leading to Master's Degree

- 1. Conditions of Candidacy.—A graduate of one of the Schools of this College, or of another institution in which the requirements for the first degree are equivalent, may become a candidate for the corresponding master's degree by making application on a blank provided for the purpose. The application must be submitted for approval to the Committee on Graduate Instruction and Degrees not later than October 15.
- 2. Nature and Amount of Work.—The minimum requirement shall be twenty-four credits in addition to the thesis, at least one-half to be graduate in character. Not less than twelve credits shall be in the major department.
- 3. Residence.—One year's resident work is required of every candidate who has not received a first degree at this College. Graduates of this College may be permitted in special cases to spend one semester at some other approved institution.
- 4. Examinations.—Final examinations are required upon the completion of each subject.
- 5. Thesis.—A thesis upon some subject connected with the major study is required, unless waived by the committee upon the recommendation of the major professor. This subject must be submitted for approval to the chairman of the Committee on Graduate Instruction and Degrees before November 15. The thesis must cover some line of original research work under the supervision of the major professor and the thesis as a whole must

be approved by the major professor and the Dean of the department. Two typewritten copies of the thesis in specified form shall be deposited in the College library.

- 6. Degrees.—The degrees offered are: Master of Science, M. S.; Master of Science in Agriculture, M. S. Agr., and Master of Science in the respective branches of engineering, e. g., M. S. (C. E.) etc.
- 7. Fees.—Before receiving his degree the candidate shall pay a diploma fee of \$10.00, and any unpaid laboratory fees.

## COST OF ATTENDANCE

#### Trust Fund

A fee of \$2.50 will be collected at the beginning of each semester to cover actual expenses incident to breakage and use of materials in the various laboratories of the College. Any unexpended balance will be returned to the student.

#### Board and Rooms

Furnished rooms in the Woman's Building or in the Boys' Dormitory (including heat, light, water, etc., two students occupying each room) are provided at \$3.00 per month each, payable in advance. Application for dormitory accommodations must be made in writing. Those occupying rooms in dormitories must furnish towels, bed linen and covers. The two dormitory buildings contain bathrooms and all necessary facilities, are thoroughly sanitary, heated by steam and lighted with electricity.

Board in the A. and M. College Dining Hall is provided at actual cost. The cost of such board is about \$2.50 per week, payable in advance. The total cost of supplies and labor is prorated at the end of every month to students boarding in the dining hall.

Board with room in private families can be obtained for \$3.25 to \$4.50 per week. Furnished rooms, \$2.00 to \$5.00 per month, if two occupy the room.

# Other Expenses

The total cost of attending the A. and M. College courses embraces the items of board, books, clothing and minor incidental

expenses of a personal character. These may be safely estimated at \$160.00 to \$200.00 for nine months. Sixty-three percent of the students materially reduce their expenses below the figures given by working in the several departments of the A. and M. College and in the City of Stillwater, and many earn all personal expenses.

# Amount Required to Begin

Those students of limited means desiring to enter the A. and M. College should have some \$75.00 available with which to bear the first items of personal expense and make sure of some months' consecutive study. This amount is estimated for young men to include:

Board and room, two months\$	36.00
Books, etc.,	8.00
Incidentals	5.00
Military uniform—hat, cap, shirt, coat, trousers and	
leggins, not over	13.00
-	
Personal expenses	62.00

With such sum in hand or available the industrious student may, by his own efforts, secure three or four months, or even a longer period, of study in the A. and M. College. The same estimates will apply to young women if cost of uniform be deducted. Extravagance in all forms is discouraged. Freshmen and Secondary School boys must supply themselves with gymnasium suits costing \$2.00. Girls of the Secondary School, Freshman and Sophomore classes must supply themselves with gymnasium suits costing \$6.00.

# Approved Rooming Houses

Comfortable and desirable homes in Stillwater are listed as "approved rooming houses" for male and female non-resident students by the Faculty Committee on Assignment to Rooms. Students are not permitted to room in other than approved rooming houses.

#### Advisers to Students

To bring about a closer relation between students and members of the Faculty and parents, and for the purpose of safeguarding every interest of the individual student, the A. and M. College has adopted an "advisory system" which applies to all students. A small number of students are assigned to each instructor, who is known as their adviser for the year, and whose duty it is to know each of them personally, and to meet them from time to time. The adviser endeavors to become familiar with the conditions surrounding his students. In many instances he selects studies suited to the student's need or adjusts the student to his work and surroundings. He calls in case of illness and will notify the parents of his visits at such times and of the general welfare and progress of his advisees. Parents should not hesitate to write to advisers or to the President concerning matters that may have to do with the students' comfort and progress in their studies.

#### Care of Health

The health of all students is a matter of chief concern to the officers of the A. and M. College. The rules require that all cases of illness be reported promptly. A responsible physician is employed who attends all students without charge in cases of illness or injury received in the line of duty, except cases of major surgery. Sickrooms for the better accommodation of boys and girls suffering from illness are provided, without additional cost, in each of the dormitory buildings.

All students have access to the separate gymnasiums for boys and girls. Games and sports are encouraged for their mental relief and the physical relaxation afforded. These exercises, taken indoors and in the open air, followed by baths, and with the privilege of consultation on matters of personal health, afford valuable safeguards to the health of every student who attends the A. and M. College.

# Help

Students are employed on the farm, in the creamery, dining hall, the Printing Department and elsewhere, for which reasonable remuneration is allowed. This, in connection with other po-

sitions about the A. and M. College buildings and grounds, and such opportunities as are offered in the city, has enabled a very considerable number of students practically to make their own way through their college courses. The amount a student can earn depends almost entirely upon his thrift and energy, and the time he can spare from his studies. The rate of pay is 15 cents per hour for work faithfully performed. Skilled labor commands a better rate of pay—some lines of expert work netting the students 25 cents an hour. Many students are thus assisted and encouraged every year—the preference being given to those whose college work is meritorious. It must not be gathered from this that the A. and M. College engages to afford employment sufficient to enable every worthy young man to complete the course without other resources. With the growth of the institution has come an increased demand for this employment which it is impossible to meet in full. Yet very few students have been compelled to leave College in recent years on account of inability to secure work.

## GENERAL INFORMATION

The seat of the Oklahoma Agricultural and Mechanical College is Stillwater, in Payne County, a "college town" of 5,000 people, most beautifully and healthfully situated at an elevation of 915 feet above sea level. Payne County was one of the five original counties of Oklahoma Territory and is named for David F. Payne, the noted pioneer, who first settled near the present site of the College. Stillwater citizens and students of the A. and M. College enjoy the advantages of electric lights, telephones, free delivery of mail, a city water system, sewerage, and a very complete system of brick walks shaded continuously by trees. Stillwater is on the Santa Fe Railroad (Arkansas City and Pauls Valley branch). The main connections are at Guthrie, Pawnee, Shawnee, Cushing and Davenport.

## Moral Influences

Eight leading churches are represented in Stillwater and the students are encouraged to attend and participate in their services. As a matter of fact, the Sunday schools and the young people's societies of the several churches in Stillwater are sustained very largely by the students from the A. and M. College.

A Young Men's Christian Association and a Young Women's Christian Association are actively engaged in the numerous and beneficial lines of work characteristic of these organizations among students. These student organizations are not merely helpful to their membership, but exert a wholesome influence on the moral life of the A. and M. College. Social gatherings and entertainments are made to contribute to the moral welfare of the students of both sexes, and these add to the address and composure of those who seek the helpful influences of this institution.

# Grades and Reports

Grades are stated by a system of letters. The semester grade is the average of the daily grade and the grades made in tests, and in making up the final grade for the semester, the semester grade shall count two-thirds and the final examination grade one-third. Reports showing the grades and standing of students are sent to parents and guardians at the end of each semester. Attention is particularly directed to these reports; they are the best indication of the work and standing of the student.

For the information of parents and others, it may be stated that the letter system of grading adopted by the A. and M. College compares with the percentage system about as follows: A grade of A is practically equivalent to a percentage of 95-100, inclusive; a grade of B corresponds to 90-94 plus; C to 80-89 plus; D to 70-79 plus; E to 50-69 plus; F below 50. A final grade of D or better is necessary to pass in any study.

#### Theses

In some departments a thesis is required for graduation, and in other departments it is elective. Students intending to write theses must select the subject not later than the last week of the first semester, the subjects to be approved by the departments having charge of the work.

# Diploma

Each candidate for graduation in the four-year courses shall deposit with the Registrar \$2.50. Candidates for graduation in the Business Course and in the Short Course in Agriculture and Home Economics shall deposit with the Registrar \$1.00 before the student is recommended for graduation.

# Library

The College library consists of all the books belonging to the College. The Experiment Station library is correlated with it. The library occupies five large rooms and an office in the Library Building. The fifth room was added this year, and is already filled, which fact shows rapid growth. The first and largest room is used as a reference and readingroom, and contains all the general reference books, magazines, periodicals, etc. The other four rooms are used as stack rooms. The library is open fourteen hours each day, except on Sundays. The library is classified according to the Dewey Decimal System, and indexed in a dictionary card catalog. The library is a depository for all Government publications. Bound volumes in the library in July, 1915, were 19,894. There are now 24,936 bound volumes, showing an increase of 5.042 bound volumes. There are over 70,000 unbound pamphlets, arranged by authors and quickly obtainable for reference work. In addition, the library possesses over 50,000 unbound periodicals, which are rapidly being bound. The library receives 490 of the leading newspapers and periodicals of the United States. Twelve of the large dailies of the United States are kept on the reading desk for the use of the students, and most of the magazines indexed in the Reader's Guide are on our shelves.

Purpose.—It is the purpose of the Librarian not only to supplement the work of every department, but also to make the library the center of all literary activity of the College. Every effort is made to assist the students in the use of the reference books, catalogs and indexes, and to familiarize themselves with the best books and use of bibliographies.

Valuable Gifts.—The library has been enriched by the gift from the Carnegie Institution of Washington of all their publications, and also by the studies from the Rockefeller Institute of Medical Research. Each of these great institutions has placed the library on the "Omnia List". Other valuable gifts include several thousand periodicals and several hundred books.

Regulations.—Books may be drawn by all the officers and students of the College and by others having special permission. Books are drawn for a period of two weeks. General reference, reserve books, periodicals and dictionaries must be consulted in

the readingroom, and not drawn from the library except at closing time, and must be returned when the library opens the following morning. Citizens and visitors, whether connected with the College or not, are invited to make free use of the reading and reference room, and assistance in reference work will gladly be given them.

Library Science Course.—In connection with the English Department, a course of Elementary Library Science is given. This course does not aim to fit students for library positions of any kind, but to familiarize the students in the use of the library and general reference books in connection with their college work. Laboratory work is given in the library in connection with the lectures and recitations. This course is required of all Freshmen.

#### Literary and Other Societies

General literary societies are always active among the students. The Philomathean, the Omega and the Alpha Societies enroll a large percent of the entire student body, and, in addition, a number of clubs and societies have been formed by students specializing in science, engineering, pedagogy, agriculture and domestic science for the purpose of supplementary work and investigation. The Athletic Association has charge of all local College sports, the" Tug-o-War" and Field Day exercises, and of the interests of the institution in the interscholastic and intercollegiate meets. The Oratorical Association has charge of the representation of the A. and M. College in the preliminary intercollegiate oratorical contests.

#### Of Interest to Girls

About one-third of the students of the Oklahoma Agricultural and Mechanical College are young women. All courses are open to them except Veterinary Medicine.

The course in Home Economics is of great practical value to young women because it is carefully arranged to give science with practice in the best possible proportion and order.

In order to meet the demand for a more general course, the "Science and Literature" course has been established. This course will be found to be especially adapted to the needs of

young women desiring higher education in literature, languages, history, etc., and offer training in music, elocution and domestic science.

A complete teacher-training course is offered by the School of Education to those who desire professional training for teaching in high schools and colleges. A State life certificate is awarded those graduating in this course.

### Athletics, Military Drill and Discipline

The constant purpose of the A. and M. College is to develop "sound minds in sound bodies" and to train the moral faculties. Clean sports and games on the field cultivate the mental and moral sides of the individual as well as the physical side, while affording needed occasion for relaxation and the repair of muscular and nerve tissues. Ball games and track athletics are encouraged by the A. and M. College authorities.

The Gymnasium for Men is under the supervision of the Physical Director. The exercises in the Woman's Gymnasium are directed by competent lady instructors.

The Northeastern Interscholastic Track and Field Meet is held on the A. and M. College grounds annually, to which the schools of all sections of Oklahoma are invited.

Baseball and football are provided with suitable grounds, and tennis courts are at the disposal of students.

Military drill is given during the first two years of the College course for its physical effects, and as required by the Federal law establishing this and other similar colleges. The good results of this drill are quickly noticed in the improved health and carriage and deportment of those coming under its helpful influence. Young men, especially, need such training to give the erect carriage and strong physique that marks the man of military training.

A commissioned officer of the United States Army is assigned to duty regularly at the A. and M. College as Commandant of Cadets. Instruction in military science is provided for all male students, and infantry drill is given in the field movements and under arms. Arms, accounterments and ammunition have been supplied by the Federal Government. The military discipline is

mild but firm, and cultivates habits of punctuality, alertness and the sense of personal responsibility. A rifle club organized by volunteers is an interesting feature of military training.

#### Honor Students

The honor students for the session 1914-15 were as follows: School of Agriculture.—C. W. Rapp, Senior, 96 4-7%; O. C. Boyd, Junior, 96%; Otto J. Moyer, Sophomore,, 95 9-16%; H. J. Miller, Freshman, 95¼%.

School of Engineering.—W. B. Elston, Senior, 95 7-9%; W. R. Marsh, Junior, 94¼%; R. F. House, Sophomore, 92 14-15%; Arthur Ellis, Freshman, 91¾%.

School of Home Economics.—Nina Selph, Senior, 93 8-19%; Elizabeth Denton, Junior, 90 10-21%; Maude Brower, Sophomore, 93 1-19%; Hazel Olentine, Freshman, 94 15-22%.

School of Science and Literature.—Theodore Friedemann, Senior, 93 4-9%; Floy Krone, Junior, 91 1-5%; William B. Robinson, Sophomore, 94 9-11%; Magdalen Winkleman, Freshman, 92 5-9%.

School of Teachers' Normal Training.—Nina Boyd, Senior, 96 11-14%; Lucile Heston, Junior, 94 1-9%; Grace Poole, Sophomore, 93%; A. O. Martin, Freshman, 95 1-15%.

School of Commerce and Marketing.—Jesse Pickard, Sophomore, 92 9-16%; J. E. Ketchum, Freshman, 90 6-7%.

School of Veterinary Medicine.—H. C. Boyd, Sophomore, 90 5-8%; F. B. Schnorrenberg, Sub-Freshman, 93 13-16%. Freshman class, President's prize, H. J. Miller, 95¼%; A. O. Martin, 95 1-15%.

The \$5.00 prize offered by the English Department was won by O. G. Wilson, a Junior engineering student. Fred S. Reynolds, a Senior animal husbandry student, won the Otey prize, given by Financial Secretary M. J. Otey, to the student who overcame the most serious difficulties in his college career.

#### SCHOOLS OF INSTRUCTION

The schools of instruction are planned and grouped to suit the natural needs and desires of the students in attendance at this institution, as indicated by the experience of several years past. Formerly the studies offered by the several departments of the College were grouped in "Divisions". As a result of recent developments and change these are now known as "Schools" and their subdivisions are termed "Courses", thus the School of Engineering has its Electrical Engineering course, Mechanical Engineering course, etc.

Under the present organization the studies of the College are grouped into the following Schools:

- 1. The School of Agriculture.
- 2. The School of Engineering.
- 3. The School of Home Economics.
- 4. The School of Science and Literature.
- 5. The School of Education.
- 6. The School of Commerce and Marketing.
- 7. The School of Veterinary Medicine.

### THE SCHOOL OF AGRICULTURE

W. L. CARLYLE, Dean

#### COURSES OF INSTRUCTION

The following courses of study, designed to meet the requirements of students of the various classes, have been arranged by the department:

#### General Course in Agriculture

This course of study leads to the degree of Bachelor of Science (Agriculture), and offers scientific training in agricultural bacteriology, agricultural chemistry, agricultural economics, agricultural education, agricultural engineering, agricultural journalism, agronomy, animal husbandry, dairying, horticulture, entomology, poultry husbandry and veterinary science. In addition to these specific subjects relating directly to agriculture, it embraces a general training in chemistry, botany, bacteriology, zoology, English and other branches which have an application in agriculture and which are designed to give a broad, general education for the man who wishes to devote his time and talent to agricultural pursuits, investigations or teaching.

The field is so broad, however, that it is impossible for any student in four years to take advantage of all the lines of work offered. As will be seen in the curriculum of studies, the work in the Freshman, Sophomore and Junior years is very much the same for all students, giving a maximum of the necessary fundamental studies. The Senior year, however, gives much liberty for selection and for elective studies in the particular branch of agricultural science that the student may be interested in.

# Short Course in Practical Agriculture

This course is designed for young men from the farms of Oklahoma who have not the time nor the inclination to take a regular course in the high schools of the State to be followed by a four-year course in scientific agriculture in this institution, yet who desire a training in the practical application of the science of agriculture to the business of farming. It provides a course of study that will give the student a maximum of the agricultural studies relating to farm and livestock work and in addition gives as much of the general studies as may be most useful in training young men to become leaders in their chosen calling on the farms of the State or as teachers of agricultural subjects in the rural schools of the State if the essential preparatory studies have been taken before entering the course.

The course of study includes work in agricultural chemistry, agricultural economics, agricultural engineering, field crops, soils, animal husbandry, including stock judging, and a study of the feeding and care of animals, dairying, horticulture, farm management, poultry husbandry, animal diseases and entomology.

The outline of studies is such as will impart the greatest amount of directly useful knowledge that can be acquired in a brief length of time. The course of study includes three winters' work begins November 20, 1916, and closes February 24, 1917.

For further details and illustrated circular describing this course, application should be made to the Dean of Agriculture, Stillwater, Oklahoma.

# One Week Course in Milk and Cream Testing

The dairy laws of the State require that all persons who operate stations where milk or cream is bought on a butterfat basis shall have a reasonable knowledge of how the Babcock test is operated. There is also the requirement that station operators shall know in a general way the factors that influence the quality of the product they are handling.

The Dairy Department offers a short course for station operators and for those who intend to operate a station. The work will consist mainly of laboratory work, supplemented by lectures. Emphasis will be given to milk and cream testing. There will be a brief discussion regarding methods of production and handling sanitary milk and cream. The relation between cream buyer and farmer will be considered, as will also the dairy laws of the State. The course will be held in 1916, December 18-22.

Opportunity to take examination for license will be given at the end of the course.

#### Farmers' Course in Agriculture

The Farmers' Course in Agriculture is designed to meet the growing demand on the part of the busy farmer who is actually engaged in the work on his farm and who cannot avail himself of a college course, yet desires the latest information on the various phases of his work on his farm. The course will consist of addresses, demonstrations and exercises covering a period of one week, designed to give busy farmers the most useful instruction and practice in the various phases of field crop culture, stock feeding and management, horticulture, dairying and kindred subjects in the shortest possible time and at a season when they can be away from home for a brief period.

The course will be held in January, 1917, and is given under direction of the Extension Division, assisted by the teaching staff and Experiment Station staff of the A. and M. College, assisted by other speakers and specialists. Programs may be had upon application to the Director of Extension, A. and M. College, Stillwater, Oklahoma.

#### TERMS OF ADMISSION

#### General Course in Agriculture

The requirements for admission to this course are stated in terms of units in common with all other regular courses in the College. The term "unit" means the equivalent of five recitations a week for one year in one branch of study in the Secondary School. Fifteen units are required for admission, an allowance of one credit being made, however, where an applicant has completed fourteen units of work in an accredited high school. The fifteenth unit may be made up from the Secondary School studies offered in the College.

Applicants will be required to present three units in English; one in social science, including history; one in natural science; two in mathematics, which shall be made up of one unit in algebra and one in plane geometry; three academic units, including foreign language, and five additional units shall be elective from vocational, science, or other subjects.

# Admission of Adult Special Students

Persons twenty-one years of age who do not possess all the requirements for admission and are not candidates for a degree or a certificate will be permitted to enter any of the courses in the School of Agriculture upon giving satisfactory evidence to the Dean of the School that they are prepared to take advantageously the studies which they desire. If they desire to take advanced studies, such as are offered in the Junior and Senior years, they must show special preparation or special necessity for such course.

Candidates applying for admission on the above basis are required to present a detailed statement of their preparatory studies at the time of their admission.

#### Short Course in Practical Agriculture

Students in this course must be at least sixteen years of age and have a good common school education. No entrance examinations are required.

## Degrees

The degree of Master of Science (Agriculture) will be conferred upon agricultural students who present at least one year of advanced study under direction of the Faculty of the School and present an acceptable thesis on a topic approved by the Graduate Committee of the Faculty.

#### GENERAL COURSE IN AGRICULTURE

The following outline of study represents the required and elective work in the School of Agriculture. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits in addition to military drill and physical training. The thesis, or substitute work approved by the dean of the department must represent some phase of the student's work in his major study, for which a maximum of 4 credits will be given. Before graduation every student in agriculture must have had at least six months of actual farm experience satisfac-

tory to the dean of the department.

In the outline below, figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### General Course

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMEST	ER	
Hou	rs. Credit.	. I	Hours.	Credit.
Eng. 101, Elements of		Eng. 102, Elements of		
Composition 3	3	Composition 3	3	3
Chem. 101, Inorganic 3	(4) 4 1-3		2 (4)	3 1-3
Bot, 101, General 2	(4) 3 1-3	A. H. 102, Market		
Farm Engr. 101, Farm		Types	2 (3)	3
Mechanics 1	(4) 21-3	Hort. 104, Vegetable		
Dairy 101, Elements of		Gardening	2 (2)	2 2-3
Dairying 2	(2) 2 2-3	Bot. 102, General 2	2 (4)	3 1-3
Mil. Sci	(3) 1	Eng. 123, Public Speak-		
Physical Education	(3) 1	ing1		1 2-3
		Mil. Sci	(3)	1
		Physical Education	(3)	1
			` '	_

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Credit.	Hours.	Credit.
Eng. 203, News Writing 2	2	Chem. 206, Quantitative	
Chem. 207, Qualitative		Agricultural Chemistry 2 (6)	4
Analysis 1 (3)	2	Vet. Med. 210, Anatomy	
Chem. 205, Organic 2 (3)	3	Physiology	
Hort. 201, Fruit Grow-		or	
ing 2 (2)	2 2-3	Bot. 204, Plant Physi-	
A. H. 201, Breeds of		_ ology 2 (2)	2 2-3
Livestock 2 (4)	3 1-3	Bact. 310, General 2 (4)	3 1-3
Agron. 201, Cereals 2 (4)	3 1-3	Zool. 208, General 2 (4)	3 1-3
Mil. Sci(3)	1	Agron, 202, Forage	0 1-0
(,,		Crops 2 (2)	2 2-3
		Mil. Sci	1
		(3)	- 1

# Agronomy Course

		3		
FIRST SEMES	TER		SECOND SEMESTER	
Farm Engr. 303, Farm		Credit.	Agron. 302, Soil Fertil-	. Credit.
Motors	. 2 (4)	3 1-3	ity 3 (6	) 5
Agron. 305, Cotton Pro- duction	. 2 (2)	2 2-3	Hort. 304, Plant Breed-	2
Bot. 303, Genetics		2 3 1-3	Enty. 302, General 3 (2) A. H. 306, Animal Nu-	3 2-3
Poultry 305 Econ. 301, Basic Organi-	. 2	2	Farm. Engr. 304, Farm	3
zation		3	Structures 1 (4	2 1-3

#### SENIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Credit.	Acres 402 Francisco Hours.	Credit.
Agron. 409, Advanced Crops or		Agron 404 Crop Im-	3 1-3
Agron. 405, Advanced	3 1-3	Agron. 404, Crop Improvement 1 (4) Agri. 402, College and Station Work 1 (1) Agri. 404, Bulletin Re-	2 1-3
Agron. 421, Farm Ac-		Station Work 1 (1)	1 1-3
Agron. 407, Seminar 1 (2)	1 2-3 1	Agri. 404, Bulletin Re- view 1 (2)	1 1-3
Electives	2	view	1 5 2-3
Anim	al Husba	andry Course	
	JUNIOR		
FIRST SEMESTER	~	SECOND SEMESTER	
A H 301 Livestock	Credit.	A. H. 302, Livestock	Credit.
A. H. 301, Livestock Record Work	1 2-3	Judging	2 1-3
POULTY 505, Parm Poul-	2	trition 3	3
try 2 Agron. 301, Soils 2 (4) Farm Engr. 303, Farm Motors 2 (4)	2 3 1-3	Vet Med 310 Animal	2 2-3
Farm Engr. 303, Farm		Diseases 2 (2) Enty. 302, General 3 (2)	3 2-3
Motors	3 1-3	Diseases	2 2-3
ology 3	3	Structures 1 (4)	2 1-3
	SENIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
A. H. 401, Livestock Hours.	Credit.	A. H. 404, Animal Pro-	Credit.
Selection 1 (6)	3	duction	3
A. H. 409, Animal Breed- ing	3	duction	1 1-3
ing 3 A. H. 405, Practicums Econ. 201, Elements of	1 1-3	Agron 402 Form Man-	1 1-3
Economics 3	3 5 2-3	agement 2 (4)	3 1-3
Electives	5 2-3	agement 2 (4) Agri. 402, College & Experiment Station	
		Work 1 (1) Electives	1 1-3 5 2-3
	Dairying		
	JUNIOR	YEAR	
FIRST SEMESTER	,	SECOND SEMESTER	
Hours.	Credit.	Hours.	Credit.
Farm Engr. 303, Farm Motors	3 1-3	A. H. 306, Animal Nu- trition	3
Econ. 201, Elements of	3	trition	3 2-3
Dairy 303, Testing Milk		Clation 3 (4)	4 1-3
& its Products	3 1-3 2 2-3	Vet. Med. 310, Animal Diseases 2 (2)	2 2-3
Bact. 311, Dairy Bacteriology 2 (4)	3 1-3	Electives	3
010gy	SENIOR	VEAD	
FIRST SEMESTER	SENIOR	SECOND SEMESTER	
Hours	Credit.	Hours	Credit.
Dairy 405, Cheesemaking 1 (6) Dairy 407, Milk Produc-	3	Dairy 404, Dairy Tech- nology	3
11011	3	Dairy 406, Dairy Semi- 1	1
A. H. 409, Animal Breed- ing	3	Agri. 402. College & Ex-	1
Electives	7	periment Station Organization & Functions 1 (1)	1 1-3
		Agri. 404, Bulletin Re-	
		view 1 (2) Electives	1 2-3 9

# Horticultural Course

FIRST SEMESTER		SECOND SEMESTER	
Hours.  Hours.  Hours.  Pomology	Credit.  3 1-3 3 1-3 3 1-3 2 2 3	Hort. 306, Nursery	Credit. 2 1-3 2 3 3 1-3 3 2-3 3
	SENIOR	YEAR	
Hort. 401, General   Hours.	Credit. 2 2-3 3 3 1-3 3	SECOND SEMESTER Hours. Hours.   Hours. Hours.	Credit. 2 2-3 2 1 2-3 1 1-3 3 2 2 1-3

Students desiring special certificate permitting them to teach in the schools of Oklahoma must take three semesters of education, one in psychology, one in theory and practice of teaching, one elective in education.

# DEPARTMENT OF AGRONOMY

M. A. Beeson, Professor Adrian Daane, Assistant Professor Wallace Macfarlane, Assistant Professor

The course in agronomy is designed to familiarize the student with the principles underlying productive soils, plant growth and farm management. It offers practical training in these modern fields of science, preparing young men to successfully solve the problems of farm life and fitting them for educational and research work.

The subject matter of these courses comprises the most recent information and experimental data. While the conditions in different sections of Oklahoma are given special consideration, yet the instruction is not intended to be limited geographically.

The courses of instruction in this department are coordinated with the courses in animal husbandry, dairy husbandry, agricultural engineering, poultry husbandry, horticulture and entomology. By this arrangement and the electives allowed, the student will be

able to get a comprehensive knowledge of the three large branches of agricultural science—the soil, the plant and the animal. And, too, the student has an opportunity to get either a general education to fit him more particularly for general farming and extension work, or he may specialize in any particular division of the Agronomy Department, as crops, soils and farm management.

The courses in farm management are designed to correlate the information obtained in other courses so that the student may understand the principles involved in analyzing and conducting a farm as a profitable business. This course will be especially helpful to those who wish to do extension work or take charge of farms.

The work in the Department of Agronomy is two-fold: First to fit young men to successfully solve the soils and crops problems which are an integral part of every farmer's experience. Second, to fit students to fill creditably positions in agricultural colleges, experiment stations, and as investigators in governmental and state experimental work, high schools, farm managers and extension workers for colleges and railroads.

There is a constantly increasing demand for men trained in soils, crops and principles of farm management, and every year the department is asked to recommend men for such desirable positions in colleges and experiment stations; instructors in agriculture in high schools; investigators in governmental and state experimental work, farm managers and extension workers.

The Station farm used by the Department of Agronomy consists of 160 acres of medium rolling land, well situated for experimental and demonstration work. It is well equipped with all kinds of farm machinery necessary in crop production.

The general field and experimental plats of the Experiment Station used for breeding and testing farm crops and for conducting experiments in methods of soil management, afford the student excellent opportunities for study and investigation.

The large, well equipped laboratory for soil physics and soil fertility work is maintained for the regular use of students.

A research laboratory is well supplied with necessary appara-

tus for the use of the instructors and advanced students in doing research work.

The crops laboratory is well equipped with material and specimens for a detailed study of the different cereal, forage and fiber crops.

The following is a detailed description of the courses offered in lecture rooms and laboratories:

# **SUBJECTS**

201 Cereal Crops. Class 2 hours, laboratory 4 hours. Credit 31/3.

A study of the origin, history and development and the factors influencing the growth of the various cereal crops. The characteristics, adaptation, preparation of the seedbed, culture and uses of the most important crops are studied.

202 Forage and Fiber Crops. Class 2 hours, laboratory 2 hours. Credit 2%.

A study of the history, development, growth, distribution, culture and uses of the forage and fiber crops. Annual and perennial grasses and forage crops, including legumes, cereals and sorghums, are studied with special reference to their culture, adaptation, production and uses. In the laboratory a study is made of the different seeds with special reference to their identification, quality and purity.

Text: Piper.

305 Cotton Production. Class 2 hours, laboratory 2 hours. Credit 23/3.

Varieties, methods of selection, planting, culture, harvesting and marketing of the cotton crop will be considered in detail. The laboratory work consists of testing fibers and grading, together with field work.

301 Soils. Class 2 hours, laboratory 4 hours. Credit 31/3.

A general introductory course dealing with the origin, formation, composition and classification of soils, the physical properties of the soil, the relation of these to soil moisture, heat and air; the liberation of plant food; soil erosion; alkali soils.

Text: Lyon, Phippin and Buckman.

**302 Soil Fertility.** Class 3 hours, laboratory 6 hours. Credit 5. Prerequisite: Agron. 301.

The relation of the plant to the soil. Influence of the plant on the natural fertility of the soil. Profitable methods of conserving fertility. Effect of different systems of farming upon the fertility and productiveness of soils. Special emphasis given to prevention of losses such as leaching of manure and burning organic matter. Relation of micro-organisms to fertility. Effect of inoculation on yield of legumes.

Text: Hopkins,

409 Advanced Crops. Class 2 hours, laboratory 4 hours. Credit 31/3.

This course takes up more advanced work in the production of the important crops throughout the United States. Emphasis will also be placed on more detailed study of the various plants that go to make up the cereal and forage crops in the United States.

404 Crop Improvement. Class 1 hour, laboratory 4 hours. Credit  $2\frac{1}{3}$ .

Prerequisite: Agron. 201, 202.

This is an advanced course in cereal and forage crops dealing with factors affecting management, improvement and breeding. The laboratory is partly devoted to the collection, reading and classification of material concerning cereal and forage crop improvement.

405 Advanced Soils. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Agron. 302.

Physical or chemical study of special soils in which the student is especially interested. Centrifugal analysis; time and depth of cultivation; moisture and temperature; surface washing, prevention; determination of elements of plant food on their home farms; effect of various fertilizers, as determined by pot and field experiments. Study of fertility experiments at other Stations.

415 Soil Survey. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Agron. 413.

Soil identification, field study of the methods of mapping soils, and practice in soil mapping.

421 Farm Accounts. Class 1 hour, laboratory 2 hours. Credit 1%.

Farm inventories, stock and crop accounts; complete farm accounts. Special emphasis is given to the interpretation of the accounts and their application to the organization and management of the farm.

402 Farm Management. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

Prerequisite: Agron. 201, 202, 301.

The purpose of this course is to assemble and correlate the principles involved in the successful management of a farm. Study is made of points to be considered in the selection of the farm, types of farming, planning and arrangement of the farmstead, the fields and crop rotations; of the cost of producing farm products. The relation of the size of farm to profits; the relation of livestock to crop production and maintenance of permanent agriculture receives consideration.

Text: Farm Management, Warren.

423 Commercial Grades and Distribution of Farm Crops. Class 1 hour, laboratory 4 hours. Credit 21/3.

Study is made of the methods of inspecting, grading and the importance of standard grades. Storing, elevators and distribution of farm crops are given special attention. In the laboratory a study is made of commercial grades of corn, wheat, oats and hay, and actual experience in grading and moisture determination.

424 Advanced Farm Management. Class 1 hour, laboratory 4 hours. Credit 21/3.

Further study of organization and field management, and a study of the actual farms over the State, noting the arrangement of fields and obtaining data on the farm, including labor, income and cost of production.

407 Seminar. Class 1 hour. Credit 1.

This work will continue throughout the year. Reports and discussions and papers will be called for on recent literature and scientific research which has recently been done in all lines of agronomic problems.

# DEPARTMENT OF ANIMAL HUSBANDRY

W. L. FOWLER, Professor D. A. Spencer, Assistant Professor W. L. BLIZZARD, Assistant Professor

The Department of Animal Husbandry gives instruction in all lines of practical and theoretical work which deal with judging, selecting, breeding, feeding, development, care and management of the various market and breed types of farm animals. The livestock industry in Oklahoma is the most important industry in the State, and for this reason the department is attempting to supply adequate instruction to meet the demands for work of this character.

# Equipment

The equipment in the form of flocks and herds, barns and outbuildings, judging pavilion, land and lots is rather complete. There has been a decided improvement both in quality and number in the herds and flocks during the last eighteen months. The number of good animals has been more than doubled. The State and Government recently spent about \$13,000.00 for the highest grade of registered horses, cattle, sheep and swine. The College has had a number of good animals from year to year for a long time.

The books in the libraries of the College, Experiment Station and department assist the students greatly in securing authentic information about livestock affairs. Special effort has been made to secure the most complete list of herd books and animal husbandry reference literature of any school in the South. The material at hand enables students to become specialists in many lines of the animal industry.

#### Courses

Judging and selection is one of the main features of the livestock work. The instruction is given with the idea that a great deal of good practice makes a proficient judge. Much time is given for work with the animals at the barns and in the judging pavilion. The score card method is used at first. In this way every point that affects the value of the animal is discussed in detail. Different breeds and types have different score cards, and by the use of all these cards students become skillful in judging the various breeds and types. Comparative judging is introduced as soon as the student has become proficient in the use of the score card. The comparative system consists in placing a class of animals in order of merit. Three or four or more animals are used as a class. Fifty percent is given to perfect placing and 50% for correct reason for placing. The Senior and postgraduate students are trained in judging so that they may, upon completing the course, assist in judging at the various county and State fairs

Breeding, feeding and management are important courses of the instruction. Several breeding experiments are in progress at the Experiment Station. Students work out the details of the experiments and thereby become acquainted with the fundamental principles governing this science. Senior students are required to spend four hours each week throughout the year in feeding the hundreds of head of livestock at the College. The feeding work is carefully supervised by the best trained instructors and herdsmen.

Livestock management is one of the principal courses on the schedule. Students are taught that good management is more necessary than theories and fancies.

The main aim of the work given the student is to train him to fill some of the fields in which there is a great demand. A combination of college training and practical experience works well in making the best men. Colleges and experiment stations, Government agencies, farmers, merchants and all commercial agencies that buy and sell the farmer's produce, need men trained as the College is doing.

#### Beef Cattle

The beef cattle section of the Animal Husbandry Department is represented by three breeds, the Hereford, Shorthorn and Angus. Good representatives of each breed are maintained, and the course of study is so arranged as to give the student practical instruction in the selection, feeding, breeding, marketing, care and management. In addition to the breeding herd, the College maintains a steer herd. It is maintained because it is much easier to keep steers in high condition throughout the year, as there is a tendency to make non-breeders of breeding cattle by keeping them in the high condition required for the best instruction work. The recent winnings of the cattle show that the present equipment is exceedingly good.

# Dairy Cattle

The livestock equipment in the dairy section consists of thirty registered Jerseys of high quality. Some of them produce as much milk and butterfat as any in the State. Daily records of about forty pounds of milk and two pounds of butterfat for about six months are common among the animals of the Rose Fern Lad family. Yearly records are kept in every case. It is planned to have the Holstein and one other breed well represented in the College herd before another year has passed. There has been a larger increase in value per head of dairy cattle in Oklahoma during the past year than any other class of livestock. More attention will be given to selecting and producing dairy cattle. A \$10,000.00 building houses the dairy cattle. Numerous lots and pasture land of several hundred acres is used in the outdoor management of the herd.

#### Horses

The horse section of the Animal Husbandry Department is represented by two breeds. Among these are good representatives of the Percheron and Standard Bred. In the collection of Percheron mares some excellent specimens are found. The Standard Breds are also represented by good individuals. This collection of horses was established some time ago, and with the individuals that have been added to it gives the student an excellent opportunity to receive some real practical work with horses. The most recent addition to this collection of horses is an outstanding good Percheron stallion.

#### Sheep

The equipment for sheep consists of a barn and two silos valued at \$2,500.00, besides several moderate sized pasture fields. The breeding flocks total about one hundred select individuals. All sheep are owned by the Experiment Station and are used in the cross-breeding experiment that was started in 1909. Purebred flocks of Shropshires, Dorsets, American Merinos and Rambouillets are maintained and afford excellent material for instruction in the types and breeds of sheep in connection with the work in practical sheep judging. Thorough courses are offered in the study of market types and breed types of sheep, together with special sheep selection, production and management.

#### Swine

The collection of swine outnumbers that of any other section of the Animal Husbandry Division. Several breeds are represented. There are more Duroc Jerseys than any other breed. A number of Poland Chinas and a few Berkshires, Chester Whites and Tamworths are kept. About fifty grade hogs are used, mainly for experimental purposes. In all, the number of swine on hand ranges from 175 to 200.

# **SUBJECTS**

102 Market Types of Livestock. Class 2 hours, practice in judging 3 hours. Credit 3.

This course consists of a study of the market types, classes and grades of horses, cattle, sheep and swine.

Text: Types and Market Classes of Livestock, Vaughn.

201 Breeds of Livestock. Class 2 hours, practice 4 hours. Credit 31/3.

Characteristics of each breed of horses, cattle, sheep, swine and jacks are considered at length. Each breed is discussed with reference to its origin, history, development and adaptation to American conditions. Much emphasis is put on the practical work in judging representatives of the various breeds according to the standards set by the show ring.

Text: Types and Breeds of Farm Animals, Plumb.

301 Livestock Record Work. Class 1 hour, laboratory 2 hours. Credit 12/3.

Prerequisite: A. H. 102 and 201.

A study of the systems of livestock registration, the use of herdbooks, the tracing of pedigrees and the leading blood lines of horses, cattle, sheep and swine.

Text: Herd Record Books.

302 Livestock Judging. Class 1 hour, practice in judging 4 hours. Credit 2½.

Prerequisite: A. H. 102, 201.

A practical course aimed to train the student to become proficient in livestock judging. The first part of the work consists of the use of the score card as applied to the different types and breeds. The major portion of the work is done by the method of comparative judging, using rings of from three to five animals.

Text: Livestock, Craig.

306 Animal Nutrition. Class 3 hours. Credit 3.

Principles of animal nutrition; composition and digestibility of various feeds; balanced rations; economical feeding of animals for various purposes.

Text: Feeds and Feeding, Henry and others.

401 Livestock Selection. Class 1 hour, practice in judging 6 hours. Credit 3.

Prerequisite: A. H. 102, 201, 302.

Required of students who are candidates for judging teams.

This course deals with the judging of market classes as well as the different breeds of purebred stock. During the work of the term, occasional trips are made to the best livestock farms of the State, where the students have an opportunity to judge and to observe the management of herds and flocks. Students are urged to attend county and State fairs to observe the judging of livestock.

Text: Assigned references.

409 Animal Breeding. Class 3 hours. Credit 3.

Prerequisite: Bot. 202 (genetics), A. H. 201, 301.

Required of Seniors in animal husbandry and dairying.

A study of the principles of animal breeding and their practical application. Special emphasis is laid upon the study of heredity and its control with reference to livestock improvement.

Text: Principles of Breeding, Davenport.

404 Animal Production. Class 3 hours. Credit 3.

Prerequisite: A. H. 102, 201, 306.

Studies of the most practical and scientific methods of producing, feeding and marketing livestock,

Text: Productive Horse Husbandry, Gay; Productive Swine

Husbandry, Day; Sheep Farming, Craig.

405 Practicums—Practice in Feeding and Handling Livestock. Laboratory 4 hours. Credit 1½.

Prerequisite: A. H. 305, 306.

Practical feeding and management of horses, beef cattle, dairy cattle, sheep and swine is given in the barns, and each student is required to do the scheduled amount of this kind of work. Drill is given in grooming, feeding, care, management, fitting and training for show and exhibition purposes. The aim of the course is to aid the student to become a thoroughly practical and expert stockman.

406 Practicums-Practice in Feeding and Handling of Livestock.

Laboratory 4 hours. Credit 1½. Prerequisite: A. H. 305, 306.

A continuation of Animal Husbandry 405.

#### DEPARTMENT OF HORTICULTURE

F. M. ROLFS, Professor L. G. HERRON, Instructor J. F. RIDDELL, Foreman C. W. RAPP, Fellow

The courses offered in this department are designed to give the student a thorough knowledge of the most important lines of horticultural work. Instruction consists of lectures, recitations and practical exercises in the laboratory and field.

The facilities for instruction include lecture rooms, reading room, laboratory, implement house, and a practical work room; orchards of a number of the leading varieties of fruits, plantings of vegetables, a small nursery, a cellar, greenhouse, hotbeds, and cold frames. The department is also well equipped with tools, implements and apparatus for giving practical work.

The office, laboratory and classroom are located on the third floor of Morrill Hall. The office and horticultural reading room are combined. The room contains a number of the leading magazines, journals and reference works pertaining to horticulture, as well as a set of Station and United States Government publications. It is intended for the use of students specializing in horticulture, to give them a broader view of the subject and to keep them in touch with current horticultural information. The laboratory is well equipped with modern apparatus for horticulture research work.

The implement shed, work room, cellar, cold frames and propagating beds are located on the horticulture grounds. The work room is supplied with packing tables, workbenches and other equipment for instructional work. The department is well equipped for giving practical instruction in the various methods of plant propagation; the study of buds and twigs of fruits and ornamental plants; a study of vegetables, fruits, nuts; the design of greenhouse structures and landscape plans; seed testing, and the storing, grading and packing of horticultural products. The cold frames and hotbeds are of various types for home use and commercial purposes, and are used in the vegetable forcing work.

The orchard, vineyard and garden of the Experiment Station offer practice in the pruning and training of various fruits, and also give an opportunity for comparison of the various cultural methods. The grounds, cellar and greenhouse afford ample material for laboratory and classroom work.

# SUBJECTS

104 Vegetable Growing. Class 2 hours, laboratory 2 hours. Credit 22/3.

This course includes the general principles of vegetable culture, dealing principally with a study of the home garden. Attention will be given to garden soils and fertilizers, forcing and market gardening, as well as other culture features.

Text: Vegetable Gardening, Watts.

Reference: Gardening for Profit, Henderson.

201 Fruit Growing. Class 2 hours, laboratory 2 hours. Credit 23/3.

A course designed to give the student a practical knowledge of fruit growing and at the same time serve as a foundation work for the course in Systematic Pomology. It embraces a study of planting, pruning, spraying, cultivation, cover crops, frost prevention and fertilizers for orchards and small fruits. The practical work includes making of orchard plans, laying out the orchard, planting, pruning and spraying, and the identification and judging of fruits most commonly grown in Oklahoma.

Text: Productive Orcharding, Sears.

Reference: Principles of Fruit Growing, Bailey.

301 Systematic Pomology. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

A study of the origin and history of our cultivated fruits, and of the varieties best adapted to the home and commercial orchards. Trees representing the different species of our leading fruits are carefully observed and also the influence of environment upon the behavior of the trees and on the development of their products. Practice is given in describing and identifying varieties of fruits and nuts, placing exhibits, and fruit judging.

Text: Systematic Pomology, Waugh.

306 Nursery Practice. Class 1 hour, laboratory 4 hours. Credit 21/3.

A study of methods by which plants are propagated by means of division, cuttings, layering, budding and grafting, production and care of seeds, seed testing, bulb reproduction; exercises in the laboratory in propagating garden seeds, flowers, shrubs and common fruits; nursery practice.

Text: Bailey's Nursery Book.

Reference: Principles of Plant Culture, Goff.

304 Plant Breeding. Class 2 hours. Credit 2.

A study of the application of principles in breeding, to improve our fruits and vegetables; the selection and fixing of varieties; the improvement of plants by selection. Special attention is given to breeding for quality and disease resistance. Practical work is given in the orchard, garden and greenhouse in cross pollination, hybridization and selection.

Text: Plant Breeding, Bailey.

Reference: Plant Breeding, Davenport.

401 Commercial Pomology. Class 2 hours, laboratory 2 hours. Credit 23/3.

A course treating of the care of fruit trees, the management of orchards and the handling of fruit. Problems of pruning, spraying, cultivating and frost prevention are studied; also the most approved methods of harvesting, grading, packing, transportation, marketing, storing and construction of cold storage plants. A careful study of the control measures for insect pests and fungus and bacterial diseases are also given considerable attention.

Text: Fruit Harvesting, Marketing and Storing, Waugh; American Fruit Culturist, Fuller.

**402** Landscape Gardening. Class 2 hours, laboratory 2 hours. Credit 2%.

A study of the principles involved in the planting and decorating of public and private grounds and the selection of ornamentals adapted for planting in Oklahoma. Practice consists in designing plans, laying out drives and walks, and planting flower beds, shrubs and trees.

Text: Landscape Gardening, Kempt, revised by Waugh.

Reference: The Landscape Beautiful, Waugh.

405 Forestry. Class 3 hours. Credit 3.

A lecture and field course dealing with the general principles of forestry, relation of forestry to agriculture, windbrakes, shelter belts, forest propagation and conservation.

Text: Green's Principles of American Forestry.

Reference: Practical Forestry, Gifford.

404 History and Literature of Horticulture. Class 2 hours. Credit 2.

Open only to students taking the horticultural course. A study of current horticultural literature, including a review of horticulture periodicals, bulletins and United States Government publications.

# DEPARTMENT OF DAIRYING

J. M. Fuller, Professor C. A. Burns, Assistant Professor C. P. Unwin, Foreman of Factory

The people of the United States are paying approximately \$1,000,000,000.00 a year for the various dairy products they consume. The demand for these products is constant and keeps pace with the increase in population. Indeed, the demand for certain dairy products is increasing faster than the growth in population would suggest. Take the case of ice cream. Fifteen years ago the amount of ice cream manufactured was comparatively very small. Today some 200,000,000 gallons are needed to supply the demand, and there is every prospect that the future will see this demand much increased.

An industry whose products retail for \$1,000,000,000.000 annually must be well organized. As a result, we have, for example,

city milk companies with plants valued into the hundreds of thousands of dollars. These companies employ men whose compensation ranges from a few hundred dollars a year in the case of inexperienced men to several thousand dollars a year in the case of experienced, efficient men. Again, some of the corporations manufacturing butter pay the managers of their various plants salaries ranging upward of \$4,000.00 or \$5,000.00 a year.

Commercial dairy work (with city milk supply companies, ice cream plants, condensaries, creameries, etc.) is a field scarcely touched as yet by technically trained dairymen. More and more commercial dairy work will use men who have had the advantage of the training offered by collegiate courses in dairving. This training must be supplemented by practical experience. For such men the compensation will compare most favorably with the compensation received in other vocations. Those who do not care to enter the field of commercial dairving will find opportunities in college and experiment station work, in secondary school work, and in Government service. Many dairy students turn toward the dairy farm as offering a most attractive field. They recognize the stability of dairy farming and see its financial possibilities. The dairy graduate has many possible lines of activity open to him. The compensation he will ultimately receive depends to a great extent upon his own endeavors. The possibilities compare most favorably with those of other fields of activity. The course in dairying is planned to give a broad general training, and in addition to offer such technical courses as will give a thorough knowledge regarding various lines of dairy activity.

The department occupies a two-story brick building. A main structure 30 by 60, and a wing 32 by 50 give ample floor space for department offices, classrooms, creamery and ice cream room, laboratories and storerooms.

The department operates throughout the year a commercial creamery and ice cream plant. Students specializing in dairying have opportunity to investigate practical and scientific problems in buttermaking. The manufacture of several thousand gallons of ice cream annually makes it possible for students to study the problems of ice cream making from a practical as well as from a classroom standpoint. The farm dairy laboratories are well

equipped with separators, churns and butterworkers. All necessary equipment for giving thorough instruction in the use of the Babcock test is provided. Students specializing in dairving have access to the department bulletin files. These files contain bulletins on all phases of dairying and represent the results of dairy experimental work carried on at various experiment stations. The dairy instructors give part time to Experiment Station work. At the present time experimental work on the testing of ice cream, and on the various problems connected with the manufacture of ice cream, are carried on. Students have an excellent opportunity to acquaint themselves with the methods of obtaining dairy experimental data.

# SUBJECTS

101 Elements of Dairying. Class 2 hours, laboratory 2 hours. Credit

This course gives the student a broad survey of the field of dairying. As the title suggests, the course is somewhat elementary in nature and will include a study of the secretion of milk, the Babcock test, farm buttermaking, farm separators, production of sanitary milk, cow test associations, advanced registry testing and the like.

303 Testing Milk and Its Products. Class 2 hours, laboratory 4 hours. Credit 31/3.

A thorough study in the use of the Babcock test. Includes testing of milk and cream for butterfat, calibration of glassware and testing skimmilk, buttermilk, cheese, condensed milk and ice cream for butterfat. The lactometer and its application to detection of adulteration, different methods of testing for acidity, fermentation tests, detection of oleomargarine, renovated butter and tests for preservatives in different dairy products are also included. Commercial dairy products will be tested to determine whether State and Federal standards have been observed

Text: Testing Milk and Its Products, Farrington and Woll.

304 Factory Operation. Class 3 hours, laboratory 4 hours. Credit

Takes up a study of modern methods in buttermaking, including pasteurization, ripening, starters, churning and moisture control. Includes also the subject of creamery management, different forms of creamery organization, creamery construction and accounting.

405 Cheesemaking. Class 1 hour, laboratory 6 hours. Credit 3.

The work given covers such subjects as methods of producing and handling milk for cheesemaking, the manufacture of cheddar and other cheese; a study of the chemical and bacteriological changes which take place during the ripening process, and the construction and management of cheese factories. Among the varieties of cheese that will be manufactured are cheddar, brick, gouda, pimento and cottage cheese.
Text: The Science and Practice of Cheesemaking, Van Slyke and

Publow.

404 Dairy Technology. Class 2 hours, laboratory 3 hours. Credit 3.

A study of milk and its products as a food; milk and disease; pasteurized milk, modified milk, fermented milk, the manufacture of milk sugar, casein, condensed and evaporated milks, milk powder, oleomargarine and renovated butter. The manufacture of plain and fancy ice creams, ices, etc., will be given particular attention in classroom and laboratory.

Text: Dairy Technology, Larsen and White.

#### 407 Milk Production. Class 3 hours. Credit 3.

A study of factors governing choice of a dairy breed, best me.hods of handling dairy cattle, improving standards of production, sanitary and certified milk production, planning and equipping dairy barns and milk houses, equipping the dairy farm, and marketing dairy products.

#### 406 Seminar. Class 1 hour. Credit 1.

Each student will prepare a thesis on a dairy subject, arranged in outline form at the beginning of the semester after consulting with the instructor. Students will be given the privilege of writing and reporting on dairy subjects of special interest to them. Summary of certain bulletins will be required.

#### 409 Domestic Dairying. Class and laboratory 2 hours. Credit 2.

Elective for Junior and Senior girls. Separation, care of milk and cream, farm buttermaking, milk dietetics and hygiene, ice cream and ices, sanitary milk, use of milk products as foods, and a study of special dairy products.

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#### DEPARTMENT OF POULTRY HUSBANDRY

B. A. AHRENS, Professor

The Poultry Department is equipped with a large administration building, which includes classrooms, incubator cellar and storage for the different poultry paraphernalia used in instruction. The plant consists of five acres of good poultry land on which are houses for laying and breeding stock. This includes a new long laying house in which instruction is given in the care and management of poultry, and also semi-monitor houses, in which instruction in breeding poultry is given. There are a number of colony houses and one long brooding house for brooding chicks on a range, which covers nearly three acres. There are upto-date incubators, including a Candee mammoth incubator. brooders of the more prominent makes, and other poultry machinery which is used for instructional purposes, not only in the scientific side of poultry, but also from a practical and commercial standpoint. Many opportunities are offered for students who are interested in poultry to get a practical education along this line. The present stock consists of ten varieties of chickens, which have been trapnested for the past three years and all of high class quality.

# **SUBJECTS**

#### P. H. 305 Farm Poultry. Class 2 hours. Credit 2.

This is a lecture course dealing with poultry houses, yards, etc.; fattening and marketing of poultry; description of breeds and varieties of poultry. The laboratory consists of practice in poultry carpentry, caponizing, killing and dressing, grades of market poultry, candling and grading eggs, and anatomy of birds.

#### P. H. 303 Poultry Practice. Laboratory 2 hours. Credit 3/3.

Practice in caponizing, killing and dressing, grades of market poultry, candling eggs, ordinary work about a poultry farm, anatomy of birds.

Elective for Juniors and Seniors.

#### P. H. 411 Poultry Judging. Laboratory 2 hours. Credit 2/3.

This consists of a study of various breeds and varieties of chickens. Origin, history and points of excellence.

Elective course for Juniors and Seniors.

# P. H. 408 Incubation and Brooding. Class 1 hour, laboratory 6 hours. Credit 3.

Every student will operate an incubator and brooder, keeping accurate records of temperature, etc.

# P. H. 404 Poultry Diseases. Class 1 hour. Credit 1.

This is a thorough study of various poultry diseases, with as much practical work as is possible. Diseased birds will be advertised for and examined in laboratory, and laboratory work carried on over these birds.

Elective for Juniors and Seniors.

# P. H. 406 Poultry Management. Class 1 hour. Credit 1.

Advanced course. Management of fowls on large poultry farms. Careful study will be made of commercial methods, and wherever possible large poultry farms will be visited. Considerable outside reading will be assigned.

Elective for Juniors and Seniors.

# DEPARTMENT OF FARM ENGINEERING

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H. L. THOMSON, Professor

The courses in farm engineering are aimed to give the student the practical knowledge of farm machines, motors, tractors, farm structures, irrigation, drainage and rural roads with which knowledge the farmer must be equipped to farm successfully today. Improved tillage, seeding, harvesting and feed preparing machinery has increased the capacity and decreased the working hours of farm labor.

The modern farm motor and tractor give ready and ample sources of power to meet the increasing demands of agriculture. The improvement in farm buildings of all kinds has been of great benefit to farm economy. Improved rural roads have brought the farm and market closer together. Irrigation has great possibilities in some sections, while drainage is of equal value in others.

The demand for teachers, farm managers, county agents, experts for farm implement firms and for tractor companies, men for United States Government and railroad work, specially trained in these subjects is great. To the man who intends to return to the farm and work for himself, this training is of particular value.

The department is supplied with the various kinds of farm machines, gas and oil engines, tractors, models of silos, barns, etc., levels and farm surveying instruments, and drainage tools to give practical work in these courses.

### SUBJECTS

101 Farm Mechanics. Class 1 hour, laboratory 4 hours. Credit 2½. A general course for all students in agriculture, covering briefly rope tying and splicing, principles of draft, cultivating, seeding and harvesting machinery, farm power, water supply, elements of leveling, terracing.

Text: Agricultural Engineering, Davidson.

303 Farm Motors. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ . Prerequisite: F. E. 101.

A study of the working principles, operation and costs of the various types of gas and oil engines. Gas tractors. Special attention is paid to the modern oil engine as an economical source of power for irrigation and other heavy duty work.

304 Farm Structures. Class 1 hour, laboratory 4 hours. Credit 21/3. Prerequisite: F. E. 303.

Design, construction, material and cost of farm buildings, including barns, silos, machine sheds, swine and chicken houses. Farm concrete construction.

Text: Farm Structures, Ekblaw.

409 Farm Power Machinery. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: F. E. 303, 304.

A study of the various power driven machines of the farm—grinders, shellers, ensilage cutters, threshers, irrigation pumps, electric lighting plants, home water supply systems—in connection with the various prime movers. The installation of gearing, belting and shafting on the farm. Farm Power house.

410 Rural Roads. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: F. E. 101, 303.

Location, drainage, roadbed materials, construction, maintenance and costs. Laws governing. Rural road machinery. Special attention is paid to the upkeep of rural roads.

Text: Roads, Paths and Bridges, Page.

412 Irrigation and Drainage. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: F. E. 303.

Study and field practice in the location, operation and maintenance of these systems. Their efficiency, costs and profits. Their effect on the land and crops. The duty of water.

Text: Irrigation and Drainage, King.

## GENERAL AGRICULTURE

402 College and Experiment Station Work, Organization and Function. Class 1 hour, laboratory 1 hour. Credit 11/3.

This course is intended to familiarize the Senior students with the history and organization of the American land grant colleges, including the agricultural experiment stations and the extension divisions. A study is made of the strong and weak points of these institutions as compared with other institutions of higher education in the United States from the standpoint of both the undergraduate and graduate student. The amount of Federal and State aid given these institutions and its distribution into educational, research and extension lines is discussed. The further object is to familiarize the student with the lines of work being undertaken in the various experiment stations and the special features that are made prominent in the various States. The laboratory work will be in the nature of research in the library. The course is designed to prepare students for entrance into college and station work where such is desired and to give those who are going into the more practical application of their calling upon the farm an opportunity to become familiar with the different institutions and the best means of utilizing the information available.

404 Bulletin Review. Class 1 hour, laboratory 2 hours. Credit 12/3.

A comprehensive study of technical and popular bulletins, designed to assist the student to get the maximum value from Government and agricultural college publications. Some practice in bulletin writing and editing.

403 Agricultural Education. Class 2 hours. Credit 2.

Required of students who expect to teach agriculture in the public schools.

#### DEPARTMENT OF SHORT COURSES

D. C. Mooring, Principal

The following short courses are offered by the School of Agriculture:

- 1. Practical Course in Agriculture.
- 2. One Week's Course in Milk and Cream Testing.

#### Practical Course in Agriculture

The practical course in agriculture is, in a way, an outgrowth of the Twenty Weeks' Short Course that has proved so popular in the past. The course now consists of three winters' work of twelve weeks each, beginning in November and closing in February. It was found that students who completed the single year of the Twenty Weeks' Short Course were anxious to pursue their studies farther. Then, too, it was almost impossible in the short period of twenty weeks to give the enterprising farm boy enough of the fundamental science of agriculture to enable him to introduce the most approved methods of farming on the home farm.

This course is designed for young men from the farms of Oklahoma who have not the time nor the inclination to take a regular course in the high schools of the State, to be followed by a four-year course in scientific agriculture in this institution, yet who desire a training in the practical application of the science of agriculture to the business of farming. It provides a course of study that will give the student a maximum of the agricultural studies relating to farm and livestock work, and in addition gives as much of the general studies as may be most useful in training young men to become leaders in their chosen calling on the farms of the State.

The entire equipment of the College—the teaching force, the library and the results obtained in experimental work—are at the service of the students of the Short Course Department.

There are no entrance examinations to be passed for admission to the Practical Course in Agriculture. The prospective student must be at least sixteen years of age and must have had training equivalent to a good, common school education.

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#### Date of Opening

The Short Course in Practical Agriculture will open this year November 20 and close February 24, 1917. A short vacation will be given at the holiday season.

#### Write for Further Information

For illustrated circular giving full details concerning the Short Courses, write the Secretary of A. and M. College, Stillwater, Oklahoma.

# Practical Course in Agriculture

		FIRST YEAR
English 4 Public Speaking 1 Grain Crops 3 Carpentry Farm Arithmetic 5 Farm Machinery 3 Gymnasium	(4) (4) (4) (3)	SECOND TERM   English
FIRST TERM	(4) (2) (2) (4) (3)	SECOND TERM   English
		THIRD YEAR
Trees & Fruits 4 Economics 3 Farm Management 3 Farm Motors & Tractors 1 Advanced Stock Judging 1 Entomology 2 Agricultural Chemistry 2	(2) (6) (6) (2) (2)	SECOND TERM   Marketing

# Special Work in Dairying

Students desiring special work in dairying may elect the following subjects, providing five or more register for the work:

SE	COND YEAR
FIRST TERM	SECOND TERM Testing Milk & Its Products
TI	HIRD YEAR
FIRST TERM  Buttermaking & Ice  Cream Making	Dairy Management 3

# One-Week Course in Milk and Cream Testing December 18-22, 1916

The dairy laws of the State require that all persons who operate stations where milk or cream is bought on a butterfat basis shall have a reasonable knowledge of how the Babcock test is operated. There is also the requirement that station operators shall know in a general way the factors that influence the quality of the product they are handling.

The Dairy Husbandry Department offers a short course for station operators and for those who intend to operate a station. The work will consist mainly of laboratory work, supplemented by lectures. Emphasis will be given to milk and cream testing. There will be a brief discussion regarding methods of producing and handling sanitary milk and cream. The relation between cream buyer and farmer will be considered, as will also the dairy laws of the State.

#### Examination

Opportunity will be given at the end of the course for taking examination for testing license.

#### THE SCHOOL OF ENGINEERING

ALFRED BOYD, Dean

In compliance with the provisions of the Morrill land grant, the teaching of engineering was begun at the Oklahoma Agricultural and Mechanical College by the establishment of a course in mechanical engineering. The first class was graduated in 1902. Later, courses in electrical, civil and architectural engineering were added in the order named. The last of these is now called the Department of Architecture. These four departments compose the School of Engineering. As far as practicable, in the development of the courses, they have been kept closely related to the important industries of the State. With the growth of manufacturing, of the oil industry, the increased use of electrical power, the improvement of highways, of water supply systems, and increased interest in better buildings, the importance of having men with the proper training will be more fully recognized.

There are two large buildings on the campus devoted to the work of instruction in engineering. These are the Engineering Building and the Shop Building. The former was erected in 1912 at a cost of \$75,000.00. It is three stories high, covers an area 160 by 80 feet, and is built of reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories, the electrical laboratory, the laboratories for the testing of structural materials and road materials, storage batteries, room for surveying instruments and office for the dean. On the next floor are the physics laboratory and lecture room, four other lecture rooms for the different departments, rooms for photometry, physical apparatus, and offices for the heads of departments. On the top floor are the large drafting rooms, classrooms and offices for several of the departments, and rooms for the storing of records.

The Shop Building is of stone and brick and covers an area of 40 by 200 feet. For a depth of 80 feet it is two stories high

and the balance one story. It provides accommodations for the wood shop, machine shop, forge shop and foundry, and a tool room.

The power plant of the College, with its steam boilers, steam engines and generators is also used by the School of Engineering for the purpose of making tests and familiarizing the student with the use of this class of machinery.

Mention should be made of the Engineering Society, an organization composed of students from the various engineering departments. They meet weekly and devote their energies to the discussion of engineering subjects. These meetings tend to encourage a lively interest in practical engineering work, and give the students confidence in speaking before an audience.

The departments of the School of Engineering will make use of the equipment of the shops and laboratories to carry on experimental work. This work of investigation will include the examination and testing of coal and fuel oil, tests of electrical apparatus, road materials, building materials, pumps, gas engines, examinations of water supply, and other subjects of importance to the people of the State.

# Professional Degrees in Engineering

A graduate of the School of Engineering who has been engaged in acceptable professional work for a period of not less than four years since graduation, who has been in responsible charge of such work for at least one year of this period, and shall present a satisfactory thesis, may be recommended to the Board of Regents for one of the following degrees: Mechanical Engineer (M. E.), Electrical Engineer (E. E.), Civil Engineer (C. E.), Architectural Engineer (A. E.).

A candidate for a professional degree must file with the committee on graduate courses, at least one year before the granting of such degree, a detailed statement of his experience. If this record is approved, the committee will turn same over to the head of the department under whom the work for the desired degree most properly falls., The head of this department will then confer with the applicant in regard to the thesis and will require monthly reports from him thereafter as to his progress. Two bound copies of the thesis must be filed not later than April 1st of the year in which he proposes to qualify for the degree.

#### COURSES IN THE SCHOOL OF ENGINEERING

The following outline of study represents the required and elective work in the School of Engineering. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate, a student must earn 34 credits per year, or a total of 136 credits, including credit given for military science and physical training. Students will not be allowed to register in fewer than twelve nor more than twenty credit hours.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### Engineering

# (For M. E., E. E. and C. E. Courses) FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
***************************************	Credit.  3 4 4 1-3 1 2-3 1 1-3	Eng. 102, Elements of Composition	Credit.  3 3 3 1-3 4 1 1-3 1 1-3
Shop 101, Woodwork       (6)         Mil. Sci	1 1	Mil. Sci	1

# Mechanical Engineering

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Math. 207, Anal. & Calc. 5 Phys. 201, Engineering Physics Eng. 209, Technical Writing 2 M. E. 201, Emp. Mach. Des. (6) Shop 203, Foundry (4) C. E. 201, Surveying (3) Mil. Sci. (3)	Credit. 5 5 2 2 1 1-3 1	Math. 208, Calculus 5 Phy. 202, Engineering Physics 4 (3) M. E. 204, Kinematics 3 (3) Shop 202, Forge (4) Mil. Sci (3)	Credit. 5 5 4 1 1-3 1

#### JUNIOR YEAR

FIRST SEMESTER	SECOND SEMESTER
C. E. 301, Appl. Mech	C. E. 302, Mech. of  Mat. 3 3 C. E. 308, Testing Lab. (3) 1 M. E. 304, Mach. Draft. (6) 2 M. E. 306, Thermodynamics 3 3 M. E. 308, Mech. Lab. (3) 1

#### SENIOR YEAR

	SENIOR	YEAR	
### HOURS.  M. E. 401, St. Eng. Des. 2 (6) M. E. 405, Mech. Lab (6) E. E. 407, A. C. Mach 3 (3) Econ. 201, Elements of Economics	Credit. 4 2 4 3 1 1-3 2	M. E. 412, St. Power PI.  Des. 1 (3) E. E. 406, El. Power Pl.  Des. 1 (3) M. E. 414, Works Management 3 Econ. 413, Contracts and Laws of Business 2 Electives of below 6	Credit. 2 2 3 2 6
	ELECT	IVES	
M. E. 403, Gas Power Engr	Credit.	M. E. 410, Plumbing Machinery	Credit.
Ci	vil Engi	neering	
SO	PHOMOR	RE YEAR	
FIRST SEMESTER		SECOND SEMESTER	
	Credit.	Math 208 Calantas Hours.	
Math. 207, Analyt. & Calculus	5	Math. 208, Calculus 5 Phy. 202, Engineering	5
Phy. 201, Engineering	-	Physics 4 (3)	5
Phy. 201, Engineering Physics	5 1 2 1 1-3 2 1-3 1	Physics       4       (3)         C. E. 204, Railway Surveying       2       (6)         Shop 202, Forge Shop       (4)         Mil. Sci	11-3
	JUNIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
**	Credit.	Hours.	Credit.
C F 301 Appld Mech 4	4	C. E. 302, Mech. of Mat. 3 C. E. 304, Reinforced	8
C. E. 301, Appld. Mech. 4 C. E. 303, Roads & Payements 2	2	Concrete 2	2
C. E. 305, Hydraulics 3 (2)	3 2-3	Concrete 2 C. E. 310, Framed Struc-	
C. E. 303, Roads & Pavements	1	tures	2 1-3
Engines 2 Chem. 321, Geology 2 Shop 301, Machine Shop (4)	2	tures 2 (6) Chem. 328, Mineralogy 1 (4) C. E. 308, Test. Lab (3) C. E. 306, Water Supply 2 Flecting	1
Shop 301, Machine Shop (4)	2 1 1-3	Elective 2	2 2
(1)			
	SENIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
C F 101 Standard Hours.	Credit.	G F 402 G Hours.	Credit.
C. E. 401, Structural Design(6)	2	C. E. 402, Concrete Structures	2
C. E. 403, Irrigation 2	2	C. E. 402, Concrete Structures	
C. E. 407, Test. Lab (3) C. E. 405, Ry. Engr 2	1 2	Econ. 412, Contracts &	2
Pet. Tech. 201	2 3 3 3	Laws of Business 2	2
Econ. 201, El. of Econ 3 Elective 3	3	ence 3	3
		E. E. 412, Dyn. Elect.	2
		C. E. 408, Thesis	2
		Elective3	3

# Electrical Engineering

SOPHOMORE YEAR

		RE YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Math. 207, Analyt. &		Math. 208, Calculus 5 (0)	
Calculus	5	Phy. 202, Engineering Physics 4 (3)	5
Physics 4 (3) Eng. 209, Tech. Wrtg 2 (0) M. E. 201, Emp. Mach.	5 2	Physics 4 (3) M. E. 204, Kinematics 3 (3) Shop 202, Forge 0 (4) Mil. Sci	4 1 1-3 1
Design U (0)	2		
C. E. 201, El. Surveying 0 (3) Shop 203, Foundry 0 (4) Mil. Sci	1 1 1-3 1		
	JUNIOR	R YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours.	Credit.
C. E. 301, Appld. Mech 4 (0) E. E. 301, Prin. E. E 2 (3) E. E. 303, D. C. Mach 2 (3) M. E. 305, Heat Pr.	4	C. E. 302, Mech. Mat 3 (0) E. E. 302, Prin. E. E 2 (3) E. E. 304, D. C. Mach 3 (6) M. E. 310, Hydraulics 2 (0) M. E. 308, Mech. Lab 0 (3) C. E. 308, Test. Lab 0 (3) Shop 302, Machine Shop 0 (4)	3
E. E. 301, Prin. E. E 2 (3) E. E. 303, D. C. Mach 2 (3)	3	E. E. 302, Prin. E. E 2 (3) E. E. 304, D. C. Mach 3 (6)	3 5 2 1 1
M. E. 305. Heat Pr.	3	M. E. 310, Hydraulics 2 (0)	2
Engr 4 (0)	4	M. E. 308, Mech. Lab 0 (3)	ī
Engr	2	C. E. 308, Test. Lab 0 (3)	
Shop 301, Machine Shop 0 (4)	1 1-3	Shop 302, Machine Shop 0 (4)	1 1-3
	SENIO	R YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours.	
E. E. 401, A. C. Mach 4 (6) E. E. 403, Telephony 3 (3) E. E. 405, Elec. Mach.	6	E. E. 402, A. C. Mach 3 (6) E. E. 404, Elec. Pr. Tr. 2 (0) E. E. 406, Elec. Pr. Pl. 1 (3) M. E. 412, Steam Pr. Pl. 1 (3) Econ. 416, Con. & Laws of Business	5
E. E. 403, Telephony 3 (3)	4	E. E. 404, Elec. Pr. Tr 2 (0)	5 2 2 2
Design 1 (3)	2	E. E. 406, Elec. Pr. Pl 1 (3) M. E. 412, Steam Pr. Pl 1 (3)	2
Design 1 (3) *E. E. 411, Wiring & Illumination 2 (0)	~	Econ. 416, Con. & Laws	-
Illumination 2 (0)	2	of Business 2 (0)	2 2
Econ. 201, El. of Econ 3 (0) *Or M. E. 421, Hydrau-	3	*E. E. 410, Elec. Rys 2 (0)	2
*Or M. E. 421, Hydrau-		*Or M. E. 420, Refrig-	_
Machinery 2 (0)	2	eration 2 (0)	2
Machinery 2 (0)	2 Archit	2 (0)	2
Machinery 2 (0)		ecture	2
Machinery 2 (0)	Archite FRESHMA	ecture	2
Machinery 2 (0)	Archite FRESHMA	ecture AN YEAR rchitectural Engineering)	2
(For Architect	Archite FRESHMA	ecture AN YEAR rchitectural Engineering) SECOND SEMESTER	
(For Architect	Archite FRESHMA ure and A	ecture AN YEAR rchitectural Engineering) SECOND SEMESTER Hours. Eng. 102, English Com-	Credit.
(For Architect	Archite FRESHMA ure and A	ecture AN YEAR rchitectural Engineering) SECOND SEMESTER Hours. Eng. 102, English Com-	Credit.
(For Architect	Archite FRESHMA ure and Asc Credit.	ecture  AN YEAR rchitectural Engineering) SECOND SEMESTER Hours. Eng. 102, English Composition Math. 108 Pl. Trig. 3	Credit.
(For Architect	Archite FRESHMA ure and Architecture Credit.	ecture  AN YEAR rchitectural Engineering) SECOND SEMESTER Hours. Eng. 102, English Composition Math. 108 Pl. Trig. 3	Credit.
(For Architect	Archite FRESHMA ure and Asc Credit.	ecture  AN YEAR rchitectural Engineering) SECOND SEMESTER Hours. Eng. 102, English Composition Math. 108 Pl. Trig. 3	Credit.
(For Architect FIRST SEMESTER Hours.  Eng. 101, English Composition Math. 105, Col. Algebra 4 Chem. 101, Inorganic 3 (4) Draw. 103, Freehand (4) Arch. 101, Descr. Geom., Shades & Shadows 1 (4) Arch. 105, Elements of	Archite FRESHMA ure and As Credit. 3 4 4 1-3 1 1-3 2 1-3	ecture  AN YEAR rchitectural Engineering)  SECOND SEMESTER Hours.  Eng. 102, English Composition	Credit. 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER  Eng. 101, English Composition Math. 105, Col. Algebra 4 Chem. 101, Inorganic 3 Draw. 103, Freehand (4) Arch. 101, Descr. Geom, Shades & Shadows 1 Arch. 105, Elements of Architecture 1 (4)	Archite FRESHMA ure and Archite Credit.  3 4 4 1-3 1 1-3	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition position Math. 108, Pl. Trig. 3 Chem. 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. (6) Arch. 106, Elements of Architecture (6)	Credit. 3 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER Hours.  Eng. 101, English Composition 3 Math. 105, Col. Algebra 4 Chem. 101, Inorganic 3 (4) Draw. 103, Freehand 4 Arch. 101, Descr. Geom., Shades & Shadows 1 (4) Arch. 105, Elements of Architecture 1 (4) Physical Education 1 (4)	Archite FRESHMA ure and Ar  Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition position Math. 108, Pl. Trig. 3 Chem. 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. (6) Arch. 106, Elements of Architecture (6)	Credit. 3 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER  Eng. 101, English Composition Math. 105, Col. Algebra 4 Chem. 101, Inorganic 3 Draw. 103, Freehand (4) Arch. 101, Descr. Geom, Shades & Shadows 1 Arch. 105, Elements of Architecture 1 (4)	Archite FRESHMA ure and As Credit. 3 4 4 1-3 1 1-3 2 1-3	Ecture  AN YEAR rchitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition 3  Math. 108, Pl. Trig	Credit. 3 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER Hours.   101, English Composition   3   Math. 105, Col. Algebra 4   Chem. 101, Inorganic 3 (4)   Draw. 103, Freehand   (4)   Arch. 101, Descr. Geom., Shades & Shadows   1 (4)   Arch. 105, Elements of Architecture   1 (4)   Physical Education   (3)   Mil. Sci	Archite FRESHMA ure and Ar  Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition position Math. 108, Pl. Trig. 3 Chem. 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. (6) Arch. 106, Elements of Architecture (6)	Credit. 3 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER Hours.   101, English Composition   3   Math. 105, Col. Algebra 4   Chem. 101, Inorganic 3 (4)   Draw. 103, Freehand   (4)   Arch. 101, Descr. Geom., Shades & Shadows   1 (4)   Arch. 105, Elements of Architecture   1 (4)   Physical Education   (3)   Mil. Sci	Archite FRESHMA ure and Ar  Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition position 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. (6) Arch. 106, Elements of Architecture (6) Physical Education (3) Mil. Sci. (3)	Credit. 3 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER Hours.   101, English Composition   3   3   3   3   3   3   3   3   3	Archite FRESHMA ure and Ar  Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1	Ecture  AN YEAR rchitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition 3 Math. 108, Pl. Trig. 3 Chem. 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. & Perspective 1 (4) Arch. 106, Elements of Architecture (6) Physical Education (3) Mil. Sci. (3)  RE YEAR  SECOND SEMESTER Hours.	Credit. 3 3 3 1-3 2 1-3
(For Architect FIRST SEMESTER Hours.   2 (0)	Archite FRESHMA ure and Ar  Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1 5OPHOMO  Credit.	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition position Math. 108, Pl. Trig. 3 Chem. 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. (6) Arch. 106, Elements of Architecture (6) Physical Education (3) Mil. Sci. (3)  RE YEAR  SECOND SEMESTER Hours.  Arch. 202, History of	Credit.  3 3 3 1-3 2 2 1-3 2 1 Credit.
(For Architect FIRST SEMESTER Hours.   101, English Composition   3   4   2   4   4   4   4   4   4   4   4	Archite FRESHMA ure and Ascertage Assertage 4 1-3 1 1-3 2 1-3 2 1-3 1 1 SOPHOMO	SECOND SEMESTER   Hours.	Credit. 3 3 3 1-3 2 2 1-3
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(For Architect FIRST SEMESTER Hours. 2 (0)	Archite FRESHMA ure and Ar  Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1 5OPHOMO  Credit.	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition 3 Math. 108, Pl. Trig. 3 Chem. 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. & Perspective 1 Arch. 106, Elements of Architecture (7) Arch. 202, History of Architecture 1 Arch. 204, Carpentry & Architecture 2 Arch. 2	Credit.  3 3 3 1-3 2 2 1-3 2 1 Credit.
(For Architect FIRST SEMESTER Hours.   2 (0)	Archite FRESHMA ure and Ar Credit.  3 4 4 1-3 1 1-3 2 1-3 1 5 OPHOMO Credit. 2 2 2	Ecture  AN YEAR rehitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition position Position Position James 102, Inorganic 2 (4) Draw. 104, Freehand (6) Arch. 102, Descr. Geom. & Perspective (6) Arch. 106, Elements of Architecture (6) Physical Education (3) Mil. Sci. (3)  RE YEAR  SECOND SEMESTER Hours.  Arch. 202, History of Architecture 1 (3) Arch. 204, Carpentry & Specifications 2 Eng. 123, Pub. Spk. 1 (2) Phy. 204, General Phys-	Credit. 3 3 3 1-3 2 1-3 2 1 1 Credit. 2 1 2-3
(For Architect FIRST SEMESTER Hours.   101, English Composition   3	Archite FRESHMA ure and A: Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1 1 GOPHOMO Credit. 2 2 4	SECOND SEMESTER	Credit. 3 3 3 1-3 2 2 1-3 2 1 1 Credit. 2 2 1 2-3 4
(For Architect FIRST SEMESTER Hours.   101, English Composition   3	Archite FRESHMA ure and Ar Credit.  3 4 4 1-3 1 1-3 2 1-3 1 5 OPHOMO Credit. 2 2 2	SECOND SEMESTER	Credit. 3 3 3 1-3 2 1-3 2 1 1 Credit. 2 1 2-3
(For Architect FIRST SEMESTER Hours.   2 (0)	Archite FRESHMA ure and A: Credit.  3 4 4 1-3 1 1-3 2 1-3 1 1 SOPHOMO Credit. 2 2 4 1	SECOND SEMESTER	Credit. 3 3 3 1-3 2 2 1-3 2 1 1 Credit. 2 2 1 2-3 4
(For Architect FIRST SEMESTER Hours.   101, English Composition   3	Archite FRESHMA ure and A: Credit.  3 4 4 1-3 1 1-3 2 1-3 2 1-3 1 1 GOPHOMO Credit. 2 2 4	Ecture  AN YEAR rchitectural Engineering)  SECOND SEMESTER  Hours.  Eng. 102, English Composition  Josition  Math. 108, Pl. Trig.  Chem. 102, Inorganic 2 (4)  Draw. 104, Freehand (6)  Arch. 102, Descr. Geom.  & Perspective (1)  Arch. 106, Elements of  Architecture (6)  Physical Education (3)  Mil. Sci.  RE YEAR  SECOND SEMESTER  Hours.  Arch. 202, History of  Architecture (1)  Arch. 204, Carpentry &  Specifications (2)  Eng. 123, Pub. Spk. 1 (2)  Phy. 204, General Physics (3)  Arch. 206, Stereotomy.  Arch. 206, Stereotomy.  Arch. 208, Drawing from  the Antique (6)  Architectural (6)	Credit. 3 3 3 1-3 2 1-3 2 1 1 Credit. 2 2 1 2-3 4 1
Tensor   Continued   Continu	Archite FRESHMA ure and A: Credit.  3 4 4 1-3 1 1-3 2 1-3 1 1 SOPHOMO Credit. 2 2 4 1	SECOND SEMESTER	Credit. 3 3 3 1-3 2 1-3 2 1 1 Credit. 2 1 2-3 4 1

#### JUNIOR YEAR

	30112016		
FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours.	Credit.
Architecture	2	Arch. 302, Historic Ornament	2
Arch. 303, Appld. Mech 3	3	Arch. 304, Strength of	3
Drainage 2	2	C. E. 304, Reinforced	_
M. E. 311, Steam & Gas	2	Concrete	2
Arch. 305, Flumbing & Drainage 2 M. E. 311, Steam & Gas Engineering 2 Arch. 307, Water Color Painting (3) Arch. 309, Working Drawings & Estimates Arch. 311, Architectural Design (12)	_	nament 1 (3) Arch. 304, Strength of Materials 3 C. E. 304, Reinforced Concrete 2 E. E. 308, Dynamo Electric Machinery 2 Arch. 308, Water Color	2
Painting(3)	1	Arch. 308, Water Color Painting (3) C. E. 310, Framed Struc- tures (6)	1
Drawings & Estimates (9)	3	C. E. 310, Framed Struc-	
Arch. 311, Architectural Design(12)	4	Arch. 312, Architectural (6)	4
200811		Design(12)	4
	SENIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours.	Credit.
Arch 401 History of	1	History of Sculpture 1	1 2
Arch. 403, Life Class (6)	2	Arch. 404, Clay Modeling (6) M. E. 424, Heating &	
Painting	2	Ventilation 2 Econ. 413, Contracts & Laws of Business 2 Arch. 406, Seminar 1 Arch. 408, Architectural	2
	_	Laws of Business 2	2
struction	2	Arch 408 Architectural	1
struction 2 Arch. 405, Seminar 1 Arch. 407, Architectural	_	Design(21)	7
Design (21)	7		
	4 4 1 . 1	D	
Archi	tectural.	Engineering	
S	орномон	RE YEAR	
	орномон		
FIRST SEMESTER		SECOND SEMESTER	Credit
FIRST SEMESTER	Credit.	SECOND SEMESTER Hours.	Credit.
FIRST SEMESTER		SECOND SEMESTER  Hours.  Arch. 202, History of	
FIRST SEMESTER	Credit.	SECOND SEMESTER  Hours.  Arch. 202, History of	2 5
FIRST SEMESTER  Hours.  Arch. 201, History of Architecture	Credit.	SECOND SEMESTER  Hours.  Arch. 202, History of	
Arch. 201, History of Architecture	Credit. 2 5 4	SECOND SEMESTER  Hours.  Arch. 202, History of	2 5
Arch. 201, History of Architecture 1 (3) Math. 207, Analytical Geom. & Calculus 5 Phy. 203, General Physics 3 (3) Arch. 207, Drawing from the Antique (6) Arch. 209, Architectural	Credit. 2 5 4 2	Arch. 202, History of Architecture 1 (3) Math. 208, Calculus 5 Phy. 204, General Physics 3 (3) Eng. 123, Public Speaking 120, Architectural Design (9)	2 5 4
Arch. 201, History of Architecture	Credit. 2 5 4 2 3	Arch. 202, History of Architecture 1 (3)  Architecture 5 (4)  Architecture 1 (3)  Arch. 208, Calculus 5 (4)  Phy. 204, General Physics 1 (3)  Eng. 123, Public Speaking 1 (2)  Arch. 210, Architectural	2 5 4 1 2-3
Arch. 201, History of Architecture 1 (3) Math. 207, Analytical Geom. & Calculus 5 Phy. 203, General Physics 3 (3) Arch. 207, Drawing from the Antique (6) Arch. 209, Architectural	Credit. 2 5 4 2	Arch. 202, History of Architecture 1 (3) Math. 208, Calculus 5 Phy. 204, General Physics 3 (3) Eng. 123, Public Speaking 120, Architectural Design (9)	2 5 4 1 2-3 3
Arch. 201, History of Architecture	Credit. 2 5 4 2 3	Arch. 202, History of Architecture	2 5 4 1 2-3 3
## Hours.  Arch. 201, History of Architecture	Credit. 2 5 4 2 3 1	Arch. 202, History of Architecture	2 5 4 1 2-3 3
Arch. 201, History of Architecture	Credit.  2  5  4  2  3  1  JUNIOR	Arch. 202, History of Architecture	2 5 4 1 2-3 3
## Hours.  Arch. 201, History of Architecture 1 (3)  Math. 207, Analytical Geom. & Calculus 5  Phy. 203, General Physics 3 (3)  Arch. 207, Drawing from the Antique (6)  Arch. 209, Architectural Design 1 (6)  Mil. Sci. (3)	Credit.  2 5 4 2 3 1 JUNIOR Credit.	Arch. 202, History of Architecture 1 (3)  Math. 208, Calculus 5  Phy. 204, General Physics 3 (3)  Eng. 123, Public Speaking 1 (2)  Arch. 210, Architectural Design (9)  Mil. Sci (3)  YEAR  SECOND SEMESTER  Hours.  Arch. 302, Historic Or-	2 5 4 1 2-3 3
Arch. 201, History of Architecture	Credit.  2  5  4  2  3  1  JUNIOR	Arch. 202, History of Architecture 1 (3)  Math. 208, Calculus 5  Phy. 204, General Physics 3 (3)  Eng. 123, Public Speaking 1 (2)  Arch. 210, Architectural Design (9)  Mil. Sci (3)  YEAR  SECOND SEMESTER  Hours.  Arch. 302, Historic Or-	2 5 4 1 2-3 3
Arch. 201, History of Architecture	Credit.  2 5 4 2 3 1 JUNIOR  Credit. 2 2	SECOND SEMESTER	2 5 4 1 2-3 3 1 Credit. 2
Arch. 201, History of Architecture	Credit.  2 5 4 2 3 1 JUNIOR  Credit. 2	SECOND SEMESTER	2 5 4 1 2-3 3 1
Arch. 201, History of Architecture	Credit. 2 5 4 2 3 1 1 JUNIOR Credit. 2 2 2 4	SECOND SEMESTER	2 5 4 1 2-3 3 1 Credit. 2
Arch. 201, History of Architecture	Credit.  2  5  4  2  3  1  JUNIOR  Credit.  2  2  2	Arch. 202, History of Architecture	2 5 4 1 2-3 3 1 Credit. 2 2 1
## Hours.  Arch. 201, History of Architecture	Credit.  2  5  4  2  3  1  JUNIOR  Credit.  2  2  4  2  2	Arch. 202, History of Architecture	2 5 4 1 2-3 3 1 Credit. 2 2 1 3 2
## Hours.  Arch. 201, History of Architecture	Credit.  2 5 4 2 3 1 JUNIOR  Credit. 2 2 4 2 1	Arch. 202, History of Architecture	2 5 4 1 2-3 3 1 Credit. 2 2 1 3 2
## Hours.  Arch. 201, History of Architecture ## Hours.  Math. 207, Analytical Geom. & Calculus ## 5 Phy. 203, General Physics ## 3 (3)  Arch. 207, Drawing from the Antique ## (6)  Arch. 209, Architectural Design ## 1 (6)  Mil. Sci. ## Hours.  FIRST SEMESTER  ## Hours.  Arch. 301, History of Architecture ## Hours.  Arch. 203, Masonry Construction ## 209, Tech. Writing 2  Arch. 209, Tech. Writing 2  C. E. 301, Appld. Mech. 4  Arch. 305, Plumbing & Drainage ## 2  M. E. 311, Steam & Gas Engineering ## 2	Credit.  2  5  4  2  3  1  JUNIOR  Credit.  2  2  4  2  2	SECOND SEMESTER	2 5 4 1 2-3 3 1 Credit. 2 2 1 3 2

#### SENIOR VEAD

	SELVIO	1 1211		
FIRST SEMESTER		SECOND SEMES	STER	
Hours.	Credit.		Hours.	Credit.
E. E. 411, Wiring & Illu-		M. E. 424, Heating &		
mination 2	2	Ventilation		2
C. E. 411, Steel Con- struction	2	C. E. 402, Concrete		2
C. E. 401, Structural	4	Structures Econ. 413, Contracts &		4
Design(6)	2	Laws of Business		2
C. E. 407, Test. Lab (3)	2	Arch. 307 & 308, Water	-	_
Arch. 405, Seminar 1	1	Color Painting		
Arch. 311, Architectural		or		
Design (12)	4	Arch. 404, Clay Modeling		2
Engineering Elective 3	3	Arch, 406, Seminar	1	1
		Arch. 312, Architectural	(10)	4
		Design	(12)	4
		Engineering Elective	4	4

#### Two-Year Special Course in Architecture

For draftsmen and other mature students who desire to supplement office and outside experience with College training in History, Drawing, Water Color Painting, Clay Modeling and Design. The broad range of "electives" allowed will provide opportunity for the addition of constructional or general educational subjects. Where students come prepared to do advanced work, the course will be arranged within the limits of the curriculum to meet the course will be arranged within the limits of the curriculum to meet the second of the curriculum to the second of th ranged within the limits of the curriculum to meet such cases. As for other "Short Courses" of the College, no entrance examinations will be required, but each student must satisfy the department that his preparation has been adequate to enable him to carry the work with success. A certificate will be given on the completion of the course.

#### FIRST YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours. Cr	edit.
Arch. 201, History of		Arch. 202, History of	
Architecture 1 (3)	2		2
Arch, 207, Drawing from		Arch. 208, Drawing from	
the Antique(6)	2		2
Arch. 307, Water Color	_	Arch. 308, Water Color	_
Painting(3)	1		1
Arch. 101, Descriptive		Arch. 102, Descr. Geom.	0 1 2
Geometry, Shades & Shadows	2 1-3	& Perspective	2 1-3
Shadows 1 (4) Arch. 311, Architectural	2 1-3		4
Design(12)	4	Elective 5	4 5
Elective 5	4 5	Dicetive	,
	SECOND	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours, Cre	edit.
Arch. 301, History of	Credit.	Arch. 302, Historic Or-	cart.
Architecture 1 (3)	2		2
Arch. 403, Life Class (6)	2	Arch. 404, Clay Model-	
Arch. 401, History of			2
Painting 1	1	Arch. 402, History of	

ī

(21)

402, History of 

(21)

Painting 1
Arch. 405, Seminar 1
Arch. 407, Architectural

Design .....

Elective .....

#### DEPARTMENT OF MECHANICAL ENGINEERING

EDWARD JOSEPH KUNZE, Professor CHARLES JABLOW, Associate Professor EDGAR ELI BREWER, Foreman of Shops FRANK RUSSELL BRADLEY, Instructor DE WITT HUNT, Instructor

The field of the mechanical engineer includes the design and construction of tools and machinery; the solution of problems of power generation, including those presented by the advent of the steam turbine and the gas engine; power transmission by mechanical means; and all questions involving refrigeration, heating and ventilation, gas manufacture and the mechanical equipment of railroads. He is concerned with the design of farm motors and of agricultural machinery; with hydraulic machinery for the water supply of cities; with operations involved in mining and ore preparation; and with the design and equipment of steamships. To him is entrusted the problems concerning pumps, compressors and mechanical conveyors. More broadly still, he has now come to be a conspicuous factor in our industrial development as an organizer, systematizer, and cost reducer. matter of record that for three years after graduation most technical men are engaged as draftsmen and subordinates; that for the next five years most are classed as superintendents, engineersin-fact, and minor executives, and that after eight years the larger proportion of mechanical engineering graduates are firm members, managers, and executive officials. Of the membership of the American Society of Mechanical Engineers, for example, 50% are manufacturers or chief officials; 16½% are engaged in professional practice as consulting specialists; while only 4% are actually concerned with details of mechanical design. work of the mechanical engineer is economical production. success must be based on scientific training, but it must also depend upon the study of current methods. The aim of the course in mechanical engineering is to afford both of the above kinds of The student is therefore given a thorough training in the fundamental engineering principles while at the same time he is made conversant with the principles of contemporary engineering practice.

There is a certain amount of overlapping of all the engineering courses. The student therefore acquires a broad knowledge of the different branches of engineering. The work of the Freshman year is alike for the M. E., E. E. and C. E. courses. The Sophomore work is alike for the M. E. and E. E. courses. Beginning with the Junior year the differentiation between these courses increases.

In the shops as well as in the drafting rooms, examples are made real by doing away, as far as possible, with exercise pieces as such. Real machines are designed and built for real purposes. Seniors and sometimes Juniors design the machinery that is made. Sophomores work out most of the details, and Freshmen trace the drawings. Each does the work for which he is best fitted. This intensifies the work of the student. The object is not to make engineering less rigid, but to make it more interesting, and hence more tangible.

The steam, gas power, hydraulic and fuel and lubricant testing laboratories are all equipped with apparatus necessary for carrying on complete experiments. The wood shop, forge shop, machine shop and the foundry are likewise completely equipped with tools and machinery necessary to do work along lines obtaining in practice.

## SUBJECTS

## Mechanical Engineering

M. E. 102 Engineering Drawing. Drafting 4 hours. Credit 1½.

Required of Freshmen in M. E., E. E. and C. E. second semester.

Lettering and drawing of machine parts from copy; drawing to scale.

Text: Engineering Drawing, French.

M. E. 201 Empirical Machine Design. Drafting 6 hours. Credit 2. Prerequisite: M. E. 102.

Required of Sophomores in M. E. and E. E. first semester.

Machine drawing and proportioning of machine parts from the standpoint of good usage and general appearance rather than from the analysis of stresses.

Text: Engineering Drawing, French.

M. E. 204 Kinematics. Class 3 hours, drafting 3 hours. Credit 4. Prerequisite: M. E. 201; Math. 101.

Required of Sophomores in M. E. and E. E. second semester.

Theory of mechanism and application to instant-centers, cams, gears, linkages, belting, ballbearings, velocity and acceleration diagrams, etc.

Text: Elements of Mechanism, Schwamb and Merrill.

M. E. 301 Materials of Machines. Class 2 hours. Credit 2.

Prerequisite: Shop 202, 203; Phy. 201; Chem. 102.

Required of Juniors in M. E. first semester.

The manufacture and properties of iron and steel as applied to machine construction; heat treatment of steels; metallography; alloy steels; properties of copper alloys and bearing metals.

Text: Metallurgy of Iron and Steel, Stoughton.

M. E. 303 Machine Design. Class 3 hours. Credit 3.

Prerequisite: M. E. 201, 204. Concurrent with M. E. 301.

Required of Juniors in E. E. first semester.

Design of machine parts by analysis of stresses applied and selection of proper factors of safety. Applications of the laws of mechanics and kinematics to the design of machines, and a consideration of modifications due to practical conditions.

Text: Machine Design, Kimball and Barr.

M. E. 304 Machine Drafting. Drafting 6 hours. Credit 2.

Prerequisite: M. E. 303.

Required of Juniors in M. E. second semester.

Draftingroom applications of the work given in M. E. 303. Design and working drawings of complete machines. A short time is devoted to the subject of jig and fixture design.

Text: Machine Design, Kimball and Barr; Mechanism, Schwamb and Merrill.

Reference Book: Kent's Mechanical Engineer's Handbook.

M. E. 305 Heat Power Engineering. Class 4 hours. Credit 4.

Prerequisite: Phy. 202. Concurrent with M. E. 307.

Required of Juniors in M. E. and E. E. first semester.

A functional course covering the construction and operation of steam and gas power apparatus, including reciprocating and turbine steam engines, internal combustion engines, gas producers, boilers and power plant auxiliaries.

Text: Heat Power Engineering, Hirshfeld and Barnard; Steam Tables, Marks and Davis.

M. E. 306 Thermodynamics. Class 3 hours. Credit 3.

Prerequisite: M. E. 305; Math. 208.

Required of Juniors in M. E. second semester.

The laws and properties of gases and vapors as applied to steam engines, gas engines, steam turbines, compressors and refrigerating machinery.

Text: Heat Power Engineering, Hirshfeld and Barnard.

M. E. 307 Mechanical Laboratory. Laboratory 6 hours. Credit 2. Concurrent with M. E. 305.

Required of Juniors in M. E. and E. E. first semester.

Calibration of indicator springs, steam gages, thermometers, dynamometers and planimeters; of steam and fuel calorimeters; of venturi, disk and piston type meters. Proximate analysis of coals. Flash and burning tests of oils. Tests of lubricants and fuel oils.

Text: Power Plant Testing, Moyer.

M. E. 308 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Prerequisite: M. E. 305, 307. Concurrent with M. E. 310.

Required of Juniors in M. E. and E. E. second semester.

Tests of water wheels, hydraulic ram and centrifugal pumps. Flow over weirs, through orifices, nozzels and flumes and other hydraulic tests. Tests of injectors, pumps and air compressors. Valve setting with the use of the indicator. Engine and boiler tests.

M. E. 310 Hydraulics. Class 2 hours. Credit 2.

Prerequisite: C. E. 301.

Required of Juniors in M. E. and E. E. second semester.

This course includes hydrostatics, hydrokinetics and hydrodynamics and water power development.

Text: Hydraulics, Russell.

M. E. 311 Steam and Gas Engineering. Class 2 hours. Credit 2.

Prerequisite: Phy. 202.

Required of Juniors in C. E., A. E. and Arch. first semester.

The construction and selection of power plant machinery, including the different types of engines, boilers, pumps, compressors, refrigerating machines and power plant auxiliaries.

Text: Heat Engines, Allen and Bursley.

M. E. 401 Steam Engine Design. Class 2 hours, drafting 6 hours. Credit 4.

Prerequisite: M. E. 304, 306.

Required of Seniors in M. E. first semester.

A study of the various types of reciprocating steam engines. Theoretical and practical considerations entering into the design of valve gears and engine details. Governor design. Balancing and the determination of flywheel weights. Compound Engines. Graphical as well as mathematical methods of design are employed. The principal parts of a highspeed automatic cutoff engine or of a Corliss engine are laid off on the drafting board.

M. E. 403 Gas Power Engineering. Class 2 hours. Credit 2.

Prerequisite: M. E. 306.

Elective for Seniors in M. E. first semester.

A study of modern internal combustion engines (gas, gasoline, oil and alcohol), and of the production of gas for motive power (natural, illuminating, producer, blast furnace and coke oven gas). Gas producers and gas cleaning. Theory and method of internal combustion engine design.

Text: Modern Gas Engine and Gas Producer, Levin.

M. E. 405 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Prerequisite: M. E. 308.

Required of Seniors in M. E. first semester.

Special engine and boiler tests; Hirns' analysis and various overall tests of power plants.

M. E. 407 Compressed Air Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 303, 305.

Elective for Seniors in M. E. first semester.

A study of the physical properties of air and of the characteristics of the different types of air compressors with a view to intelligent

selection of the proper type and size for a given set of conditions. Single and multi-stage compression. Hydraulic compression of air. Measurement and transmission of compressed air.

Text: Air Compression and Transmission, Thorkelson.

M. E. 409 Pumping Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 303, 305.

Elective for Seniors in M. E. first semester.

History and development of pumping machinery; force and lift pumps; reciprocating and centrifugal pumps; hydraulic presses and hydraulic pressure lines. Theory and method of design of pumps; study of the characteristics of the various types with a view to intelligent selection of the proper type and size for a given set of conditions.

Text: Pumping Machinery, Greene.

M. E. 412 Steam Power Plants. Class 1 hour, drafting 3 hours. Credit 21/3.

Prerequisite: M. E. 305.

Required of Seniors in M. E. and E. E. second semester.

A plant is designed on the drawing board after a careful study has been made of the different types of power plant apparatus; selection of units is then made to fulfill certain given conditions.

Text: Steam Power Plants, Mever.

M. E. 414 Works Management. Class 3 hours. Credit 3.

Prerequisite: Shop 302.

Required of Seniors in M. E. second semester.

This course covers the consideration of the entire works, including shops, departments and office as follows: Factory location and arrangement, organization and administration, duties of line and staff, cost of production and methods of modern manufacture for the attainment of accuracy and of high speed, time study, motion study, standardization, etc. Employment of labor, labor problems and wage systems. Industrial betterment.

Text: Principles of Industrial Organization, Kimball.

M. E. 416 Thesis. Class work or laboratory as assigned. Credit 4. Prerequisite: All preceding subjects.

Elective for Seniors in M. E. second semester.

The student is assigned a problem requiring some individual research, investigation or design on his part for the purpose of demonstrating ability or aptitude for independent work.

M. E. 418 Advanced Design. Drafting 3 to 12 hours. Credit 1 to 4. Prerequisite: M. E. 304, 305.

Elective for Seniors in M. E. second semester.

The work of design will come under some of the following subdivisions: Machine Tools, including fixtures and attachments; Boilers, including a study of the different types of boilers, furnaces, automatic stokers and of smoke abatement; Internal Combustion Engines, a more intensive study than is given in M. E. 305; Gas Power Machinery, including gas producers, scrubbers, tar separators, washers, holders, etc.; Special Machinery.

#### M. E. 420 Refrigeration. Class 2 hours. Credit 2.

Prerequisite: M. E. 304, 306.

Elective for Seniors in M. E. and E. E. second semester.

A study of the theory and principles of construction and operation of the different types of apparatus used and of the different systems employed in refrigeration. This course includes ice making, cold storage, and the further adaptation of refrigeration to the arts.

Text: Mechanical Refrigeration, Macintire.

## M. E. 422 Hydraulic Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 310 or C. E. 305.

Elective for Seniors in M. E. and E. E. second semester.

Theory, design, construction and installation of water wheels, pressure engines, and of modern hydraulic turbines, and a study of their characteristics with a view to intelligent selection of the proper type and size for any given set of conditions. Water power development.

Text: Hydraulic Turbines, Daugherty.

#### M. E. 424 Heating and Ventilation. Class 2 hours. Credit 2.

Prerequisite: M. E. 305 or M. E. 311 second semester.

Elective for Seniors in M. E.

Required of Juniors in A. E. and Arch.

Theory and design of the various systems for the heating and ventilation of buildings; hot air, hot water, steam, and the plenum and vacuum systems. Central station or district heating.

Text: Heating and Ventilating Buildings, Carpenter.

## Shop Practice

The lectures on shop practice are given occasionally during the regular class periods. Informal talks are also given from time to time as the need to cover some general consideration is presented.

## Shop 101 Woodworking. Shop practice 6 hours. Credit 2.

Required of Freshmen in M. E., E. E. and C. E. first semester.

The student in this course is required to make a graded set of exercises in woodwork and receives practice in the use and care of hand tools. Wood turning and joinery. Lectures are given on modern special woodworking machinery.

## Shop 104 Patternmaking. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 101.

Required of Freshmen in M. E., E. E. and C. E. second semester.

The student in this course is required to make a graded set of wood patterns. As far as possible all exercises are selected from designs of machines to be built in the shops. The course also includes core box construction. Lectures are given on pattern shop equipment.

Text: Wood Patternmaking, Purfield.

## Shop 202 Forge Shop. Shop practice 4 hours. Credit 11/3.

Required of Sophomores in M. E., E. E. and C. E. second semester.

The student is required to make a graded set of forgings and the various types of welds. Tool dressing, hardening and tempering,

casehardening, and the heat treatment of carbon and high speed tool steels is performed by the student. Lectures are given on the study of wrought metals and on heat treatment.

Text: Forge Practice, Bacon.

Shop 203 Foundry. Shop practice 4 hours. Credit 11/3.

Required of Sophomores in M. E., E. E. and C. E. first semester.

The student is required to make a graded set of molds of patterns which, for the most part, are to be used on machines or apparatus that is to be built in the shops. Preparation and charging the cupola, pouring off heats and mixing and baking cores. Lectures are given on modern foundry practice.

Text: Elementary Foundry Practice, Richards.

Shop 301 Machine Shop. Shop practice 4 hours. Credit 11/4.
Required of Juniors in M. E. and E. E. first semester.

Shop 302 Machine Shop. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 301.

Required of Juniors in M. E. and E. E. second semester.

Shop 401 Machine Shop. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 302.

Required of Seniors in M. E. first semester.

The student in these courses is required to make a graded set of machine parts. As far as possible all exercises are selected from designs of machines that are to be built in the shops. Lectures are given on the art of cutting metals.

Text: Machine Shop Practice, Kaup.

## DEPARTMENT OF ELECTRICAL ENGINEERING

WILLIAM CARL LANE, Professor

Assistant

The course in electrical engineering is designed to give the student a thorough training in the fundamental principles of electricity and in their application to the problems of the engineer. The successful electrical engineer must have a broad general engineering training in addition to his training in electricity; hence, the student is required to take a number of subjects in the other departments of the School of Engineering. These include applied mechanics, heat power engineering, refrigeration, hydraulics, strength of materials and several other of the allied engineering branches.

The first two years of the course are devoted to the fundamental subjects. During this period the student receives a careful training in English, mathematics, chemistry, physics, drawing, surveying and shop practice.

The electrical engineering work proper begins in the Junior year. One course which extends throughout the year deals with the principles of electrical engineering, and covers both direct and alternating currents from the theoretical side. Other courses take up in detail direct current machinery and electric wiring and illumination. All courses include laboratory work of a practical nature. The Senior year's work includes a detailed study of alternating current machinery, electric power plant design, electric power transmission and telephony. Laboratory practice in alternating currents includes testing of generators, motors, synchronous converters, transformers, rectifiers and meters. The work in power plant design includes the design of a plant for some city with which the student is familiar. Care is taken to coordinate all work of the classroom with the work of the laboratory.

The dynamo laboratory, located on the first floor of the Engineering Building, is equipped with modern direct and alternating current generators and motors, synchronous converters, transformers, rectifiers, arc lamps, starting devices and switchboards. An ample supply of voltmeters, ammeters, wattmeters, tachometers and other necessary measuring instruments is provided. The laboratory equipment is representative of modern practice. No machines are wired up permanently. The students of each class are required to wire up the machines and adjust them for best operation before performing an experiment. At the close of a test all wires are disconnected.

The battery room and the calibrating laboratory are adjacent to the dynamo laboratory. The former contains a 90-cell storage battery for supplying energy for calibrating purposes, a battery for operating the College bell system, and other experimental batteries. The latter is equipped with a Leeds-Northrup potentiometer and standard shunts, a standard Weston voltmeter, a Weston indicating wattmeter and the other necessary auxiliary apparatus for calibrating both laboratory and commercial instruments.

Modern telephone apparatus is provided for use in connection with the course in telephony. A darkroom is equipped with a photometer and standard lamps, and is devoted exclusively to photometric work.

## SUBJECTS

#### Electrical Engineering

301 Principles of Electrical Engineering. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Phy. 202; Math 208.

Covers static electricity, the galvanic current, magnetism and electromagnetism.

Text: Principles of Electrical Engineering, Pender.

302 Principles of Electrical Engineering. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: E. E. 301.

A continuation of E. E. 301. A study of electromagnetic induction and alternating current.

Text: Principles of Electrical Engineering, Pender.

303 Direct Current Machines. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Phy. 202; Math. 208.

A study of direct current machinery.

Text: Elements of Electrical Engineering, Franklin and Esty (Vol. I).

304 Direct Current Machines. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: E. E. 303.

A continuation of E. E. 303.

Text: Elements of Electrical Engineering, Franklin and Esty (Vol. I).

308 Dynamo-Electric Machinery. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 202; Math. 208.

A study of dynamo-electric current machinery.

Text: Essentials of Electrical Engineering, Wilson.

401 Alternating Current Machines. Class 4 hours, laboratory 6 hours. Credit 6.

Prerequisite: Math 208; E. E. 302, 304.

A study of the fundamentals of alternating current and their application to alternators, transmission lines, synchronous motors and conversion apparatus.

Text: Principles of Electrical Engineering, Franklin and Esty (Vol. II).

402 Alternating Current Machines. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: E. E. 401.

A continuation of E. E. 401. A study of transformers and alternating current motors.

Text: Principles of Electrical Engineering, Franklin and Esty (Vol. II).

403 Telephony. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: E. E. 301 and 302. Theory and practice in telephony.

Text: American Telephone Practice, Kempster B. Miller.

404 Electric Power Transmission. Class 2 hours. Credit 2.

Prerequisite: E. E. 401 or 407.

Includes generation, transmission, distribution and utilization of power by electrical process.

Text: Elements of Electrical Transmission, Ferguson.

405 Electrical Machine Design. Class 1 hour, designing and drafting 3 hours. Credit 2.

Prerequisite: E. E. 304.

Theory and design of a dynamo.

Text: Electrical Machine Design, Gray.

406 Electric Power Plants. Class 1 hour, designing and drafting 3 hours. Credit 2.

Prerequisite: E. E. 401 or 407.

Theory and practice in the design of the electrical equipment of a power plant and a distribution system.

407 Dynamo-Electric Machinery. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: E. E. 308. A continuation of E. E. 308. Text: Same as E. E. 308.

410 Electric Railways. Class 2 hours. Credit 2.

Prerequisite: E. E. 401 or 407.

A study of electric railway apparatus and of the best practice.

Text: The Electric Railway, Buck.

411 Wiring and Illumination. Class 2 hours. Credit 2.

Prerequisite: Phy. 202.

Theory and practice in the design of the lighting and wiring of buildings, and of the wiring of electrical apparatus in general.

412 Dynamo-Electric Machinery. Class 2 hours. Credit 2.

Prerequisite: Phy. 202 and Math. 208.

A brief course in direct and alternating current machinery.

## DEPARTMENT OF CIVIL ENGINEERING

ALFRED BOYD, Professor
Assistant

This department offers instruction in the various branches of civil engineering. Training is given in surveying, in the principles of railway and highway construction, in designing of structures of steel and concrete, in irrigation, drainage, water supply and sewage disposal.

The department is well supplied with surveying instruments, including transits, wye and dumpy levels, compass, plane table, barometers, hand levels, chains, tapes and rods. The instruction in field work gives the students sufficient familiarity with the instruments and confidence in their use to perform the ordinary operations of surveying. Practice is given in railroad location and in the field work in connection with drainage and irrigation projects, water supply and sewer construction.

In the course in bridge and structural design, careful study is made of the theory of stresses and practice given in actual designing of wood, steel and concrete structures.

The testing laboratory contains a 100,000-pound testing machine, two briquette machines, sieves for the testing of sand and cement, moist closet, boiling apparatus, Vicat and Gilmore needles, specific gravity and permeability apparatus. For the examination of road materials the laboratory is well equipped with the standard machines. These include an abrasion machine, a hardness machine, an impact machine, diamond drill, saw and crusher. A standard rattler for the testing of paving brick, a briquette machine, a ball grinding mill, a testing sieve shaker, and the necessary apparatus for making the physical tests of bituminous materials are also provided. The equipment is valuable in connection with the course in roads and pavements.

Class instruction in hydraulics is supplemented by work in the hydraulic laboratory. Measurements of flow are made for weirs, nozzles, pipes and flumes. Tests of a Pelton wheel, of a centrifugal pump, of water meters and field measurements by means of a current meter are also made. A thorough training in hydraulics is necessary to deal with problems in water supply, irrigation, and hydraulic development.

In addition to the work in mathematics, physics and chemistry required of all engineering students, certain courses adapted to the needs of civil engineers are required. Spherical trigonometry is given in the Sophomore year, and an opportunity to elect least squares in the Junior and Senior years. Geology and mineralogy are required subjects. They have a direct bearing upon the study of road and building materials. A course in sanitary biology is offered by the Department of Bacteriology and is of

special importance for a clear understanding of sewage disposal and water supply. A course in steam and gas engineering and one in dynamo-electric machinery, given by other departments, are especially adapted to the needs of civil engineering students.

The drawing room for this department is well equipped and well lighted. There is a good collection of working drawings and designs, representing standard practice in different fields of engineering, which are used for reference in several of the courses.

## **SUBJECTS**

#### Civil Engineering

201 Elements of Surveying. Field work 3 hours. Credit 1.

Prerequisite: Math. 108.

Care, use and adjustment of the transit and level. Traversing, leveling, making of profiles, keeping of field notes.

203 Surveying. Class 1 hour, field work 4 hours. Credit 21/3.

Prerequisite: Math. 108.

Taking of topography by means of transit and stadia, and plane table. Observations for meridian. Measurements of baseline. Triangulation.

204 Railway Surveying. Class 2 hours, field work 6 hours. Credit 4. Prerequisite: Math. 108.

Exercises in simple, reverse and transition curves; preliminary and location surveys for a short line railroad; cross-sections and estimates.

Text: Railroad Curves and Earthwork, Allen.

301 Applied Mechanics. Class 4 hours. Credit 4.

Prerequisite: Math, 204.

Principles of statics; theory of structures; dynamics. Text: Applied Mechanics for Engineers, Hancock.

302 Mechanics of Materials. Class 3 hours. Credit 3.

Prerequisite: C. E. 301.

Properties of materials; flexure; beams, columns, shafts.

Text: Strength of Materials, Boyd.

303 Roads and Pavements. Class 2 hours. Credit 2.

Methods of construction and maintenance of various types of roads and pavements. Road machinery and road organization.

304 Reinforced Concrete. Class 2 hours. Credit 2.

Prerequisite: C. E. 301.

Theory and practice in the design of reinforced concrete.

Text: Reinforced Concrete Construction, Hool.

305 Hydraulics. Class 3 hours, laboratory 2 hours. Credit 33/3.

Prerequisite: Math 204-208.

Fundamental principles and their application; laboratory determination of coefficients.

Text: Textbook of Hydraulics, Russell.

306 Water Supply. Class 2 hours. Credit 2.

Prerequisite: C. E. 305.

Sources of supply. Design, construction and maintenance of waterworks systems. Methods of purification.

Text: Public Water Supplies, Turneaure and Russell.

307 Topographical Drawing. Drawing 3 hours. Credit 1.

Prerequisite: C. E. 203.

Conventional symbols, lettering, preparation of profiles and maps.

308 Testing Laboratory. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 301.

Testing of sand, cement, concrete, road materials.

310 Framed Structures. Class 2 hours, drawing 6 hours. Credit 4. Prerequisite: C. E. 301.

Stresses in simple structures; graphical analysis; elements of design.

401 Structural Design. Drawing 6 hours. Credit 2.

Prerequisite: C. E. 310.

Design of structures of wood and steel, and of reinforced concrete as applied to buildings.

402 Concrete Structures. Class 1 hour, drawing 3 hours. Credit 2.

Prerequisite: C. E. 302.

Designing of retaining walls, dams and reinforced concrete arches.

403 Irrigation. Class 2 hours. Credit 2.

Prerequisite: C. E. 305.

Capacity of canals; surveys; sources of supply; design of structures; methods of applying water; irrigation law.

404 Sewerage and Drainage. Class 2 hours. Credit 2.

Prerequisite: C. E. 305.

Design and construction of sewerage systems; modern methods of sewage disposal; methods of drainage.

405 Railway Engineering. Class 2 hours. Credit 2.

Methods of construction and maintenance of roadbed and structures; surveys and estimates; organization; signaling; economic theory as applied to location and operation.

407 Testing Laboratory. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 302.

Laboratory examinations of the various materials of construction.

408 Thesis. Laboratory 6 hours. Credit 2.
Original investigation of some engineering subject.

411 Steel Construction. Class 2 hours. Credit 2.

Prerequisite: C. E. 302 and C. E. 310.

Steel frame construction of buildings and its application to modern fireproof work.

Text: Steel Construction, Burt.

#### DEPARTMENT OF ARCHITECTURAL ENGINEERING

FREDERIC CHILD BIGGIN, Professor
Assistant

Architecture is the result of man's efforts to build beautifully. The first requirements in architecture is the ability to design—from the practical side—that the building may suit its purpose, and from the aesthetic side, that it may offer a pleasing appearance. Of the next importance are the engineering studies that are necessary for proper construction. Finally the architectural student must acquire the fundamentals at least of that broad cultural training recognized as indispensable to the success of men, who must meet other men of varied experience and work with them as professional advisers on problems often of great magnitude.

The aim of this department is to give the best training possible within the time limits of a college course. Four-year courses are offered in architecture and architectural engineering, both leading to the degree of Bachelor of Science in Architecture. The schedules of these courses conform to the "standard minima" of the Associated Collegiate Schools of Architecture. A two-year special course in architecture is offered primarily for the benefit of draftsmen.

Architectural design is taught on the basis of problems requiring a solution, development and presentation by the student under criticism, accompanied by short problems carried out with no criticism until after they are turned in for judgment. Students in architecture devote 25% of the entire course to design; for those taking architectural engineering, design is decreased to 15%, but 34% of their course consists of engineering studies and advanced construction. Throughout all years of the course in architecture runs some form of freehand drawing, the basic na-

ture of which cannot be overestimated. The history of architecture possesses a cultural as well as a technical value, for its prevailing styles reflect great movements of civilization among races—their migrations, conquests, commercial, social and religious changes. The study of history of architecture commences in the Sophomore year, and with the attendant subjects of ornament, painting and sculpture, continues through the balance of the course in architecture. Students in architectural engineering take less freehand drawing and history than those in architecture. The Freshman year of both courses being alike, ample opportunity is afforded for careful investigation before making a choice.

Of foreign languages, French is the most useful to the architect, and should, therefore, be preferably offered for entrance, and next to it in utility is German. The technical terms employed in architecture are largely French, and where the entrance requirement has been met by the offer of another language, it is desirable that the student take some French after matriculation.

During the summer vacation architectural students are expected to spend as large a part of their time as possible in the offices of practicing architects, and it has been found that those men who regularly follow this plan make the greatest advancement in college work.

The equipment of the architectural lecture room includes a Bausch & Lomb "Universal Balopticon" for the projection of slides and plates, and a carefully selected collection of lantern slides. The drawings, books and journals in the architectural library are freely accessible to students during working hours, but must not be removed from the departmental reading room without special permission, which, however, is readily given for cause. The drafting rooms are provided with "Economy" drawing tables of a type adopted as standard by the department; these have ample drawer capacity for students' work and tools, a top 39 by 72 inches in size for perspectives, and loose, inclined boards 32 by 44 inches for general use.

All courses offered are open to election by students of other departments, subject only to stated prerequisites and the consent of their department heads.

## SUBJECTS

#### Architecture

101 Descriptive Geometry-Shades and Shadows. Class 1 hour. Drafting 4 hours. Credit 21/3.

Prerequisite: Solid Geometry.

The fundamental problems of descriptive geometry are studied and applied in the delineation of shades and shadows and the solution of other problems in architecture.

Text: Practical Descriptive Geometry, Smith; Architectural

Shades and Shadows, McGoodwin.

102 Descriptive Geometry and Perspective. Class 1 hour, drafting 4 hours. Credit 21/3.

Prerequisite: Arch. 101.

Intersection and development of surfaces; isometric and oblique projections; perspective drawing.

Text: Practical Descriptive Geometry, Smith; Applied Perspect-

ive. Longfellow.

105 Elements of Architecture. Class 1 hour, drafting 4 hours. Credit 21/3.

The classic orders of architecture and elementary studies in composition, with drawings rendered in india ink,

Text: Study of the Orders, and Plates, Brown, Bourne and Von Holst; Architectural Lettering, Brown.

106 Elements of Architecture. Drafting 6 hours. Credit 2.

Prerequisite: Arch. 101 and 105.

Continuation of the orders and elementary studies in composition.

108 Descriptive Geometry. Class 2 hours, drafting 6 hours. Credit 4. A course for students in engineering. Fundamental problems of points, lines and planes; shades and shadows; intersection and development of surfaces; isometric and oblique projections; perspective drawing. Practical use of subject and its many engineering applica-

tions particularly stressed. Text: Practical Descriptive Geometry, Smith.

201 History of Architecture. Class 1 hour, research and sketches 3 hours. Credit 2.

Prerequisite: General History.

Origin and development of historical styles of architecture from the earliest times to the breaking up of the Roman Empire in the West. Typical examples are studied in detail and for this purpose the lantern is in constant use. Stress is laid on the evolution of a style from changes in structural forms, political and religious conditions, and national character.

Text: History of Architecture, Hamlin.

202 History of Architecture. Class 1 hour, research and sketches 3 hours. Credit 2.

Prerequisite: Arch. 201.

Continuation of the development of historical styles of architecture from the Moslem irruption and the accession of Charlemagne to the opening of the Renaissance, covering the prevailing periods of the Romanesque and Gothic.

## 203 Masonry Construction. Class 2 hours. Credit 2.

Building materials and construction. Foundations, footings and walls; stone and brick masonry; concrete, terra cotta and plastering. Fire resisting construction. Class work supplemented by drawing and inspection of structures.

Text: Building Construction and Superintendence, Part 1, Kidder.

## 204 Carpentry and Specifications. Class 2 hours. Credit 2.

Continuation of building materials and construction. Carpenter work; properties and uses of various woods; methods of framing; mill construction; exterior and interior finish; hardware. Technical features of specifications and relations between owner, contractor and architect.

Text: Building Construction and Superintendence, Part 2, Kidder.

#### 206 Ctereotomy. Drafting 3 hours. Credit 1.

Prerequisite: Arch. 102.

Advanced problems in projection drawing with special reference to the more complex architectural constructions, such as stone vaulting, stairs, etc.

Text: Modern Stone Cutting, Siebert and Biggin,

## 207 Drawing from the Antique. Drawing 6 hours. Credit 2.

Prerequisite: Draw. 104.

Work in pencil, pen and ink, and charcoal from casts of architectural ornament, architectural fragments and parts of the figure.

## 208 Drawing from the Antique. Drawing 6 hours. Credit 2.

Prerequisite: Arch. 207.

Work in charcoal and pastel from casts of antique sculpture.

## 209 Architectural Design. Class 1 hour, drafting 6 hours. Credit 3.

Prerequisite: Arch. 106.

A study of architectural composition, with library research. Problems in design, composition, planning, motives, details and rendering. Lectures and criticisms.

Text: Architectural Design, Varon.

## 210 Architectural Design. Drafting 9 hours. Credit 3.

Prerequisite: Arch. 209.

Continuation of problems in design, composition and planning, with research, lectures and criticism.

# 301 History of Architecture. Class 1 hour, research and sketches 3 hours.

Prerequisite: Arch. 202.

Conclusion of the analytical study of the development of architecture from the inception of the Renaissance to modern times. During the latter part of the semester particular attention is given to architectural development in the United States.

302 Historic Ornament. Class 1 hour, research and sketches 3 hours. Prerequisite: Arch. 301.

Analysis and study in detail of some of the great historic styles of decoration, with a brief outline study of the development of mosaic, ceramics, stained glass, ornamental metal work, textile fabrics, furniture and other minor arts.

Manual of Historic Ornament, Glazier.

303 Applied Mechanics. Class 3 hours. Credit 3.

Prerequisite: Mechanics for Engineers, Morley.

A course in kinematics, kinetics and statics for architects and others who have not taken the calculus.

Text: Mechanics for Engineers, Morley.

304 Strength of Materials. Class 3 hours. Credit 3.

Prerequisite: Arch. 303.

Continuation of the course in mechanics for students who have not taken the calculus. Graphical methods of determining the elastic curve of beams; centroids and moments of inertia of areas; beams and columns; properties and tests of building materials.

Text: Strength of Materials, Murdock.

305 Plumbing and Drainage. Class 2 hours. Credit 2.

Plumbing systems and fixtures; water supply and filtration; sewage disposal and general sanitation.

Text: Plumbing, Gray and Ball; Sanitation, Water Supply and

Sewage Disposal, Gerhard.

307 Water Color Painting. Drawing 3 hours. Credit 1.

Prerequisite: Arch. 208.

Work from architectural casts and from still life. Out-of-door sketching.

Text: Color Harmony and Contrast, Ward.

308 Water Color Painting. Drawing 3 hours. Credit 1.

Prerequisite: Arch. 307.

Given with special reference to conventional and sketch rendering of architectural subjects. Out-of-door sketching.

309 Working Drawings and Estimates. Drafting 9 hours. Credit 3. Prerequisite: Arch. 210.

Under such limitations as a client would be likely to impose, the estimates for a residence building of his own design.

Text: Details of Building Construction, Martin; New Building Estimator, Arthur.

311 Architectural Design. Drafting 12 hours. Credit 4.

Prerequisite: Arch. 210.

Advanced problems in design, composition and planning, with research, lectures and criticism.

312 Architectural Design. Drafting 12 hours. Credit 4.

Prerequisite: Arch. 311.

Continuation of advanced problems in design, composition and planning, with research, lectures and criticism.

401 History of Painting. Class 1 hour. Credit 1.

A brief survey of the history of painting, with special reference to mural work. Illustrated lectures and research.

Text: History of Painting, VanDyke.

402 History of Sculpture. Class 1 hour. Credit 1.

An outline study of the development of sculpture and its relation to architectural design. Illustrated lectures and research.

Text: History of Sculpture, Marquand and Frothingham.

403 Life Class. Drawing 6 hours. Credit 2.

Prerequisite: Arch. 308.

Figure sketching from the live model. Method of execution is entirely individual, whether in color or in black and white.

404 Clay Modeling. Laboratory 6 hours. Credit 2.

Prerequisite: Arch. 207 and 302.

Work from architectural casts and from sketches.

405 Seminar, Class 1 hour, Credit 1.

Reports and discussions on current architectural literature. Investigation of assigned topics. Lectures on matters of value and interest not covered by other courses.

406 Seminar. Class 1 hour. Credit 1.

Professional ethics and practice. Continuation of reports, lectures and discussions on selected topics.

407 Architectural Design. Drafting 21 hours. Credit 7.

Prerequisite: Arch. 312.

Extended problems in design, composition and planning, with research and criticism.

408 Architectural Design. Drafting 21 hours. Credit 7.

Prerequisite: Arch. 407.

Continuation of extended problems in design, composition and planning. During the latter half of the semester a single major problem is studied and worked up in detail as a thesis problem.

# SPECIAL COURSE IN MANUAL TRAINING

DE WITT HUNT, Assistant Professor

These courses are arranged for students in the education course who desire to fit themselves for teaching manual training. Advanced work is given in the School of Engineering in the following courses: Patternmaking 103 and 104, Forging 201, Foundry 204 and Machine Shop Practice 301 and 302.

101 Bench Work. Shop practice 6 hours. Credit 2.

Students having credit in Woodworking 11 and 12 will be given credit for this course. Students having had benchwork in high school will be excused from shop practice, but must take lectures given in this course.

This course covers the use of hand tools, the making of exercises involving planing, screw construction, curve forming, the dado joint and its various applications in half-lap construction, and includes elementary wood finishing.

Text: Essentials of woodworking, Griffith.

102 Cabinet Making. Shop practice 6 hours. Credit 2.

Prerequisite: Woodwork 11 and 12 or Bench Work 101.

The application of the use of woodworking machines is made in the completion of a class project involving mortise and tenon joints and paneling.

Text: Elementary Cabinet Work, Selden,

201 Advanced Wood Turning. Shop practice 4 hours. Credit 11/3.

Prerequisite: For credit Woodwork 21.

Practice in fancy turning, involving gluing up stock for spindle turning, face plate turning of cups, trays, covered boxes, table legs, spiral turning and mandrel work.

202 Art Forging. Shop practice 4 hours. Credit 11/3.

Prerequisite: Forging 201.

An advanced course in forging, adapting the work to the needs of a high school forge shop where a large proportion of interest in the work is necessary.

Text: Art Forging, Googerty,

301 Care of Shop Equipment. Lecture and Shop practice 2 hours. Credit 1.

Lectures and practice involved in the care of shop tools, saw filing, sharpening of edge tools, care of machines and installation of shop equipment will be given in this course.

302 Method of Organization in Manual Training. Lecture 1 hour,

practice 2 hours. Credit 2.

Lectures on methods of teaching and organization of the subject matter are given each week, and students are required to assist in shops classes two hours each week for practice teaching.

301 Furniture Design. Class 2 hours. Credit 1.

Prerequisite: M. E. Draw. 102.

This is primarily a course in drawing in which the student designs pieces that may be made in the shop. The designing is done from a standpoint of adapting the model to shop classes. A tracing is kept of each piece designed and an exchange of shop drawings thus established. Students may make blueprints from any of these tracings and thus go out with a well established, graded set of models,

#### PETROLEUM TECHNOLOGY

DR. CHAS. K. FRANCIS, Professor

201 Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Chem. 102.

The subject is presented by means of lectures, Government and State publications and textbooks. The chief topics considered are the origin, physical and chemical properties of petroleum; structural geology; prospecting and the study of maps.

202 Class 2 hours, laboratory 3 hours. Credit 3.

A continuation of 201. The main subject includes factors in drilling for oil; production, refining and testing. A number of inspection trips are made to Oklahoma oil fields, refineries and special products plants.

#### THE SCHOOL OF HOME ECONOMICS

RUTH MICHAELS, Dean

Courses of study in home economics have been developed as a result of social and economic changes. These changes have created a demand for an education which will prepare young women to be more serviceable in their homes and communities. In keeping with these ideas, the course includes those subjects which will make not only specially trained workers, but also broadly educated young women.

Many opportunities are open for young women who are trained along these lines. In the teaching profession, openings are found in city schools, consolidated and rural schools, and provision is made at the College for special training in this work. In other lines, aside from teaching, there are many openings for young women as designers, house furnishers and decorators; in the extension field; and as managers in various institutions.

The School of Home Economics offers the following work:

- 1. A course in food preparation and sewing during the Farmers' Week in January.
- 2. Food and Textile courses for teachers during the Summer School.
- 3. A four-year course leading to the degree of Bachelor of Science.

The purpose of the short courses is to provide, in the limited time, such training as will be most helpful to the students entering the course. The four-year course is planned for those young women who wish, (1) to combine the study of home problems and the related arts and sciences with the academic work; (2) to become teachers of home economics; (3) to enter some other professional line of this work.

#### COURSES IN THE SCHOOL OF HOME ECONOMICS

The following outline of study represents the required and elective work in the School of Home Economics. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subjects and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate, a student must earn 32 credits per year, or a total of 128 credits, not including any credit for physical training. Students will not be allowed to register in less than twelve nor more than twenty credit hours.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
H. E. 203, Food Study. 2 (4) Chem. 207, Qualitative Analysis 1 (3) Chem. 205, Organic 2 (3) Phys. 201, Advanced 3 (2) Eng. 201, Exposition 2	Credit. 3 1-3 2 3 3 2-3 2	H. E. 204, Food Study	Credit. 3 1-3 3 2 2 3
Eng. 203, News Writing 2 Fr. 101  Or  Ger. 101	3 1	Eng. 202, Narration or Eng. 204, News Writing 2 Fr. 102 or Ger. 102	2 3 1

#### JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hours	. Credit.	Hours.	Credit.
H. E. 305, Food Supply 2 (4)	3 1-3	H. E. 306, Food Study 2 (4)	3 1-3
H. E. 307, History of	•	H. E. 308, Costume De-	
H. E. 309, Drafting &	6	H. E. 310, Advanced (6)	2
Modeling(4)	) 11-3	Dressmaking(4)	1 1-3
Bact. 303, Household 2 (4)	3 1-3	Econ. 308, Business for	
Eng. 207, English Lit-		Women 2	2
erature 3	3	Eng. 208, English Lit-	
Electives 3	3	erature 3	3
		Electives 5	5

#### SENIOR YEAR

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FIRST SEMEST	ER		SECOND SEME	STER	
	Hours.	Credit.	TT T 404 TT T	Hours.	Credit.
H. E. 403, House Plan-	2 (4)	3 1-3	H. E. 404, House Fur-	. 1 (4)	2 1-3
H. E. 405, Home Eco- nomics Education	2 (4)	3 1-3	H. E. 406, Home Eco- nomics Education		3 1-3
H. E. 407, Dietetics H. E. 409, Art Needle-		3 1-3	H. E. 408, Dietetics H. E. 410, Saritation	2 (4)	3 1-3
work	(4)	1 1-3	H. E. 412, Millinery	(2)	2-3
H. E. 411, House Administration	2	2	Electives	. 5	5
Tailoring		1 1-3			
DICCHYCS	6	-			

#### FOODS, COOKERY AND HOME MANAGEMENT

RUTH MICHAELS, Professor Edith Coffman, Assistant Professor Mamie Russell, Assistant

The department has well equipped office, laboratories and lecture room in the Woman's Building. The food laboratory is finished in white enamel, has built-in desks fitted with electric plates and individual equipment. Adjoining this laboratory are store rooms and dining room; the latter furnished in attractive style, is used in connection with the planning and serving of meals. In the library may be found splendid reference books and bulletins, as well as the technical magazines.

## **SUBJECTS**

103 Survey Course. Class 1 hour. Credit 1.

Development of woman's education with special reference to the place of home economics training. The practical and educational purposes; the various phases and the different vocations in the field of home economics are thoroughly discussed.

203 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Chem. 102; Zool. 102.

The production, manufacture, chemical composition and nutritive value of the typical foods, including principles and processes involved in simple cookery.

204 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 203.

Continuation of Home Economics 203.

Text: Chemistry and Use of Food Products, Bailey.

305 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 204; Chem. 208.

Advanced study of the principles and processes involved in food preparation, considering in detail proper combinations, cost and service. 306 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 305; Phys. 201. Continuation of Home Economics 305.

Text: Food Products, Sherman.

407 Dietetics. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 306.

Study of foods as related to feeding of individuals and groups under varying conditions of health and environment; includes study of metabolismi of foods, of dietary standards, and preparation of various dietaries.

408 Dietetics. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 407.

Continuation of Home Economics 407.

Text: Manual of Dietetics, Ross; Nutrition and Dietetics, Hall.

405 Home Economics Education. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: All preceding work in the School of Home Economics.

Course is designed for students intending to teach home economics. Lectures and conferences on courses of study; equipment and maintenance of the work, as well as observation, demonstrations and practice classes are required.

406 Home Economics Education. Class 2 hours, laboratory 4 hours. Credit 31/4.

Prerequisite: H. E. 405.

Continuation of Home Economics 405.

Text: Methods of Teaching Home Economics, Kinne; Domestic Art in Women's Education, Cooley.

409 Household Administration. Class 2 hours. Credit 2.

Prerequisite: H. E. 306 and 206; Econ. 308.

Aim is to secure an intelligent judgment of expenditures involved in housekeeping.

410 Sanitation. Class 2 hours. Credit 2.

Prerequisite: Bact. 303.

Study of conditions which determine the healthfulness of house, and the application of principles of sanitation to its care. Special attention is given to care of the sick and to study of methods for prevention of diseases.

Text: Home Nursing, MacDonald.

#### TEXTILES, CLOTHING AND SHELTER

NORA A. TALBOT, Professor SUSAN E. CAGE, Instructor MILDRED V. TALBOT, Instructor

The department is located in the east wing of the Woman's Building, and has well equipped sewing laboratories, locker room and office. The laboratories are furnished with sewing tables, sewing machines, electric irons, dress forms, drafting systems, loom, illustrative material and textile exhibits.

The following courses in textiles, clothing and shelter have a two-fold aim:

- 1. The first is that to develop skill in sewing and design, and knowledge of textile growth, manufacture and application to practical problems both in clothing and in the home.
- 2. The other is that of a professional aim, added to the first, is a study of subject matter; teaching possibilities, and the method of presentation; and class management through practice teaching.

## **SUBJECTS**

105 Sewing and Textiles. Class 2 hours, laboratory 4 hours. Credit 31/4.

Study of textile fibers and fabrics, care and repair of clothing. Making of undergarments.

106 Elementary Dressmaking and Tailoring. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: H. E. 105.

Continuation of textile study given above. Making of a standard cooking apron and waist, models of seams, and making of a simple wash dress, tailored waist and wool skirt.

Text: Textiles, Woolman and McGowan.

206 Class 2 hours. Credit 2.

Prerequisite: H. E. 106; Chem. 102.

Study of textile manufacture from fiber to fabric, standard and fancy weave, and prices of fabrics. Testing fabrics for pure or adulterated materials. The organization of subject content and methods of teaching the same.

307 History of Costume. Class 2 hours. Credit 2.

Prerequisite: H. E. 206.

This course includes a survey of ancient costume, its development through modern times, its relation to social and political conditions. 308 Costume Design. Laboratory 6 hours. Credit 2.

Prerequisite: H. E. 307.

A study of line, dark and light color, and its application to dress. Original problems suggested by historical costume, bits of nature, etc., worked out in charcoal and water color.

309 Drafting and Modeling. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 308.

Course includes drafting of garments, alteration of patterns, study of line and form, making of tight-fitted lining. Modeling in paper and crinoline a dress for use in H. E. 310.

310 Advanced Dressmaking. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 309.

Problems include modeling and making afternoon gown and evening dress.

403 House Planning. Class 2 hours, laboratory 4 hours. Credit 31/3.

(Must be taken in Senior year.)

Study of floor plans which create conditions favorable to simple housework and to effective decoration. Principles of planning, construction, plumbing, estimation of costs. Correcting and drafting of a cottage plan; planning and drafting a simple dwelling house.

Text: Successful Houses, White.

404 House Furnishing. Class 1 hour, laboratory 4 hours. Credit 21/3. Prerequisite: H. E. 403.

Principles of design and color applied to selection and combination of wall coverings, window hangings, carpets, pictures and furniture in order that the student may appreciate that which is appropriate and beautiful.

409 Art Needlework. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 206.

The ornamental stitches are given in making a sampler, and their application to various articles.

412 Millinery. Laboratory 2 hours. Credit 3/3.

Prerequisite: H. E. 206 and 308.

A study of hats, the styles and shapes most becoming; frames, bows and trimmings. Renovation of materials and making over hats.

413 Advanced Tailoring. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 206 and 308.

Problems include tailored models and a tailored suit.

## THE SCHOOL OF SCIENCE AND LITERATURE

L. L. LEWIS, Dean

The courses in the School of Science and Literature offer a sound basis for training in mathematics, physics, biological sciences and in the languages. It is also becoming more and more evident that one's education should include some work in history, social science and in economics. These related subjects give a better understanding of one's duties and responsibilities as a citizen and a broad and liberal view of the relations of the individual to society.

The work of the school is presented to the prospective student along three lines. The Freshman year is the same for all, but in the Sophomore year the work is differentiated into three parts: First, the general science work where biological and chemical sciences represent a large portion of the work; second, the exact science work represented largely by mathematics, chemistry and physics; and third, where work in the English and foreign languages represent the major portion of the work. Where other courses offer vocational subjects the science and literature work, by means of the three elective groups, offers opportunities for special work in either the sciences or languages. Such opportunities meet the needs of students desiring a liberal education as a foundation for professional courses, as law or medicine, or those who have not fully decided upon their vocation, but desire to secure a training that is well balanced in respect to literature, sciences and cultural subjects.

#### Electives

It will be noted from the course that follows that certain electives are permitted in the courses, and for the benefit of the students who have planned their work along the free elective lines the Junior and Senior years are continued as electives for two years.

#### Relations to Other Schools

Besides the instruction given to students in the School of Science and Literature, the instructional force gives much of the collateral work offered in the other schools of the College. Other divisions of the College cooperate in giving some of the work offered in the Science and Literature Division.

## Equipment

All of the departments represented in the School of Science and Literature are well equipped to give the work they offer. The laboratories are especially well equipped for scientific work in chemistry, physics, botany and bacteriology.

#### COURSES IN THE SCHOOL OF SCIENCE AND LITERATURE

The following outline of study represents the required and elective work in the School of Science and Literature. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly—two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate, a student must earn 32 credits per year, or a total of 128 credits, not including any credit given for military science or physical training. Students will not be allowed to register in less than twelve nor more than twenty credit hours.

In the outline below, figures without parenthesis indicate hours of classwork; in parenthesis hours of laboratory work.

# FRESHMAN YEAR (Same for all Science and Literature Courses)

FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.	Hours.	Credit.
Chem. 101, Inorganic 3 (4)	4 1-3	Chem. 102, Inorganic 2 (4)	3 1-3
Eng. 101, Elements of	_	Eng. 102, Elements of	
Composition 3	3	Composition 3	3
Latin 101, Caesar		Latin 102, Caesar	
or		or	
Ger. 201, Advanced 3	3	Ger. 202, Advanced 3	3
Math. 105, Algebra 4	4	Math. 106, Trigonometry 4	4
Draw. 101, Freehand (4)	1 1-3	Draw. 103, Freehand (4)	1 1-3
Physical Education (3)	1	Pub. Spk. 123, Essentials	
Mil Sci. (Men)(3)	1	of Public Speaking 1 (2)	1 2-3
H. E. 103, Survey of		Physical Education (3)	1
Home Economics 1	1	Mil. Sci. (Men)(3)	1

#### General Science

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hours	. Credit.	Hours.	Credit.
Chem. 201, Qualitative Analysis	4	Chem. 210, Quantitative Analysis	4
Argumentation or Eng. 203, News Writing 2 Eng. 205, Current Lit-	2	Narrative or Eng. 204, Magazine Writing	2
erature	1 4 1-3	Pub. Spk. 222, Debating (2) Zool. 210, Comparative	2-3
Phy. 203, General	2-3	Anatomy	3 1-3 4 2
Physical Education (Women)(3)	1	Mil. Sci. (Men)	1

#### JUNIOR YEAR

FIRST SEMESTER		SECOND SEMES	TER	
Bot. 101, General	Credit. 3 1-3 5 1-3 3 2-3 3	Bot. 102, General Chem. 304, Advanced Quantitative Bact. 310, General Hist. 306, Industrial Foreign Language	2 (6) 3 (4) 2	Credit. 3 1-3 4 4 1-3 2 3

## OKLAHOMA A. & M. COLLEGE

#### SENIOR YEAR

	022.202	XLAK	
FIRST SEMESTER		SECOND SEMESTER	
Hours.	Credit.		Credit.
Edu. 301, Psychology 3 Bact. 403, Technical 3 (4)	3 4 1-3	Edu. 302, Applied Psy- chology	13
Zool. 401, General Biolo-	4 1-5	Bact. 404, Immunity 3 (4)	4 1-3
gy		Zool. 402, Embryology	
Enty. 401, Horticultural		Enty. 402, Apiculture	
Entomology		or	
Bot. 401, Systematic		Bot. 402, Morphology	
or		Chem. 402, Physical	
Chem. 401, Advanced Inorganic	5	Chemistry	3 1-3 2
Foreign Language 2	2	Bact. 402, Sanitary Sci-	
Bact. 401, Sanitary Bi-	3 1-3	ence 3	3
ology 2 (4)	3 1-3		
	Exact S	Science	
S	орномо	RE YEAR	
FIRST SEMESTER	орномо	RE YEAR  SECOND SEMESTER	
FIRST SEMESTER Hours.	OPHOMO	SECOND SEMESTER Hours. (	Credit.
FIRST SEMESTER Hours. Eng. 201, Exposition &		SECOND SEMESTER Hours. (	Credit.
FIRST SEMESTER  Hours. Argumentation &  or	Credit.	SECOND SEMESTER  Hours. ( Eng. 202, Description & Narrative or	Credit.
FIRST SEMESTER  Hours. Argumentation or Eng. 203, News Writing 2		SECOND SEMESTER Hours. ( Eng. 202, Description & Narrative or Eng. 204, Magazine	Credit.
FIRST SEMESTER  Hours. Argumentation or Eng. 203, News Writing 2 Eng. 205, Current Literature	Credit.	SECOND SEMESTER  Hours. ( Eng. 202, Description & Narrative or Eng. 204, Magazine Writing 2 Pub. Spk. 222, Debating. 1 (2)	Credit. 2 1 2-3
Eng. 201, Exposition & Hours. Argumentation or Eng. 203, News Writing 2 Eng. 205, Current Literature ture 1 Chem. 201, Qualitative	Credit.	SECOND SEMESTER Hours. (Control of the control of t	2 1 2-3
FIRST SEMESTER  Hours.  Argumentation or  Eng. 203, News Writing. 2 Eng. 205, Current Literature 1 Chem. 201, Qualitative Analysis 2 (6) Phy. 203, General 3 (3)	Credit.	SECOND SEMESTER  Hours. (Compared to the content of	2 1 2-3
Eng. 201, Exposition & Hours. Argumentation  Eng. 203, News Writing 2 Eng. 205, Current Literature 1 Chem. 201, Qualitative Analysis 2 (6) Phy. 203, General 3 (3) Math. 207, Analytics &	Credit.  2 1 4 4	Eng. 202, Description & Hours. (Narrative Published Page 10, 204, Magazine Writing 2 Pub. Spk. 222, Debating 1 (2) Chem. 210, Quantitative Analysis 2 (6) Phy. 204, General 3 (3) Math. 208, Calculus 5	2 1 2-3
Eng. 201, Exposition & Hours. Argumentation or Eng. 203, News Writing. 2 Eng. 205, Current Literature Chem. 201, Qualitative Analysis	Credit. 2 1 4	Eng. 202, Description & Hours. (  Eng. 204, Magazine Writing 2 Pub. Spk. 222, Debating.1 (2) Chem. 210, Quantitative Analysis 2 (6) Phy. 204, General 3 (3) Math. 208, Calculus 5 Mil. Sci. (Men) (3) Physical Education	2
Eng. 201, Exposition & Hours. Argumentation or Eng. 203, News Writing. 2 Eng. 205, Current Literature Chem. 201, Qualitative Analysis	Credit.  2 1 4 4 5	Eng. 202, Description & Hours. ( Eng. 202, Description & Varrative  or Eng. 204, Magazine Writing 2 Pub. Spk. 222, Debating_1 (2) Chem. 210, Quantitative Analysis 2 (6) Phy. 204, General 3 (3) Math. 208, Calculus 5 Mil. Sci. (Men) (3)	2 1 2-3

## JUNIOR YEAR

FIRST SEMESTER		SECOND SEMES	TER	
Phy. 303, Advanced	Credit. 4 5 1-3 3 3 1 2-3	Phy. 304, Advanced Chem. 304, Advanced Quantitative Analysis Math. 302, Differential Equations Foreign Language Math. 204, Astronomy	2 (6)	4 4 3 3 2
	SENIOR	YEAR		

#### SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER	
Phy. 403, Advanced 3 Chem. 401, Advanced	(4)	4	Phy. 404, Advanced 3 (3) Chem. 402, Physical 2 (6)	4
Inorganic	(6)	5	Edu. 302, Applied Psy- chology	3
ogy 3		3	Chem. 420, Teaching 1	1
Foreign Language 2		2	Foreign Language 2	2
Chem. 321, Geology 2		2	Hist. 306, Industrial of U. S 2	2

#### General Literature

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Eng. 201, Exposition & Argumentation	Credit.	Eng. 202, Description & Hours.	Credit,
Eng. 203, News Writing 2 Eng. 207, Survey of English Literature 3 Hist. 201, England (a) 3 Latin 201, Cicero	2 3 3	or Eng. 204, Magazine Writing	<b>2</b> 3 3
Ger. 201	3 3 2 1 1	Latin 202, Cicero  or  Ger. 202	3 3 2 1
	TIMIOD		
NINGE CHAINERY	JUNIOR		
FIRST SEMESTER Hours.	Credit.	SECOND SEMESTER Hours.	Credit
Eng. 303, American Lit-		Eng. 304, American Lit-	•
Pub. Spk. 221, Practical (2)	2 2-3	erature	1 2-3
Edu. 301, Psychology 3 Foreign Language 3 Zool. 201, General 3 (4) Bot. 101, General 2 (4) Hist. 301, or Eng. (b) 3	3 3 4 1-3 3 1-3 3	Edu. 302, Applied Psychology 3 Foreign Language 3 Bact. 310, General 2 (4) Bot. 102, General 3	3 3 3 1-3 3
		Hist. 308, U. S. (b) 3	3
	SENIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Eng. 401, Carlyle & Ruskin	Credit.	Eng. 402, Victorian Hours. Poets	Credit.
Eng. 403, Romantic		Eng. 404, Shakespeare &	
Movement 3	3	the Drama 3	3
Edu. 301, Psychology 3 Foreign Language	3	Edu. 302, Applied Psy- chology	3
or	3	Foreign Language	
Phy. 203, General 3 Hist. 401, Modern Eu-	3	Phy. 204, General 3	.3
rope (a)	3	Hist. 404, Modern Eu-	2
Economics	3	rope (b)	3 2-3
	0-		

#### DEPARTMENT OF ZOOLOGY AND BACTERIOLOGY

L. L. LEWIS, Professor C. H. McElroy, Assistant W. P. SHULER, Assistant R. O. WHITENTON, Assistant G. B. MERRY, Assistant

The Department of Zoology and Bacteriology occupies quarters on the second floor of the Library Building. The equipment of microscopes, simple and compound; lanterns, microtomes, incubators, etc., is ample for the accommodation of all classes. The department is also well supplied with dissectable models and skeletons as well as charts for both physiology and zoology. The department gives not only the work in bacteriology and zoology

required in the science courses, but a large amount of teaching is required in other departments, as in the Divisions of Agriculture, Domestic Science, etc. The policy of the Department of Zoology and Bacteriology is to adapt the work to the needs of students coming from other divisions of the College. The following work is offered by the department in the regular College courses:

## **SUBJECTS**

#### ZOOLOGY

102 Economic Zoology. Class 2 hours, laboratory 4 hours. Credit 3½.

Required of Home Economics students.

A general study of the animal kingdom with emphasis on economic value. Types of each phylum will be dissected.

201 General Zoology. Class 3 hours, laboratory 4 hours. Credit 41/3.

Required of general science, general literature and veterinary students.

Elective: Education.

This course deals with the classification, structure and functions of the entire animal kingdom and the important biological laws,

208 General Zoology, for Agricultural Students. Class 2 hours, laboratory 4 hours. Credit 31/3.

Required: All agricultural students.

210 Comparative Anatomy of the Vertebrates. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: Zool. 201 or equivalent.

Dissection of types of vertebrates and comparison with existing and extinct forms.

401 General Biology. Class 2 hours, laboratory 4 hours. Credit 3<sup>1</sup>/<sub>3</sub>. Required: General science.

Elective: Education.

This course will be a study of the general problems of variation, inheritance and evolution.

402 Embryology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Zool. 201 or equivalent.

Required: Veterinary and general science.

Elective: Education.

A study of the development of the vertebrates, using the chick and pig as types.

#### PHYSIOLOGY

201 Advanced Physiology. Class 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: Secondary School Physiology and Freshman year Chemistry.

Particular attention is given to the physiology of nutrition and to hygiene.

#### BACTERIOLOGY

310 General Bacteriology. Class 2 hours, laboratory 4 hours. Credit 3½.

This course covers the general principles of the science and enables the student to understand the importance of bacteria as related to disease, their economy in nature and their relation to the various industries, such as dairying, soil fertility, fermentation, etc.

Prerequisite to all other courses in bacteriology, except Bact. 303

and 402.

303 Household Bacteriology. Class 2 hours, laboratory 4 hours. Credit 31/3.

This course is given only to the students of home economics, and as far as possible is made to apply to the work in which these students are most interested.

Text: Household Bacteriology, Buchanan.

311 Dairy Bacteriology. Class 2 hours, laboratory 4 hours. Credit 3½.

A study of the bacteriology of milk and of milk products. Special attention will be given to sanitation and animal diseases as they may affect milk supply.

401 Sanitary Biology. Class 2 hours, laboratory 4 hours. Credit 3½3.

This course will include the examination of water supply, studies of methods of sewage disposal, and the relation of water supply and sewage to public health problems. The laboratory work of the course will include the usual work common to board of health laboratories.

No text.

402 Sanitary Science. Class 3 hours. Credit 3.

This course is given especially to students in civil engineering. The course deals largely with water supplies, sewage disposal and the different methods of treating sewage. Time is taken at the beginning of the course to familiarize the student with the general nature and relationship of bacteria to disease.

Text: Bergey on Sanitation, and Winslow on Sewage Disposal.

403 Technical Bacteriology. Class 3 hours, laboratory 4 hours. Credit 41/3.

This course is a continuation of 310 and deals more particularly with the relation of bacteria to disease processes. Work is offered in the production of vaccines, laboratory diagnosis, etc.

Text: Bouldon, Citron and Simon.

404 Advanced Work in Immunity. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: Bact. 301 and 403.

This semester's work completes a year's work in technical bacteriology in which the student is given theoretical and practical training in work along sero-diagnostic and immunological lines. This course is intended to fit a student for taking up original problems in the subject in the capacity of an investigator or in the ever-broadening field of municipal work.

Text: Simon, Emery, Zinser.

#### DEPARTMENT OF CHEMISTRY

L. CHAS. RAIFORD, Professor
E. V. LYNN, Assistant Professor
V. T. JACKSON, Instructor
H. E. REDENBAUGH, Instructor
E. E. HARNDEN, Graduate Assistant
CHAS. W. CRAWFORD, Graduate Assistant
PAUL F. ORR, Graduate Assistant

The courses of instruction offered by the Department of Chemistry have been arranged to meet—

- 1. The special requirements of students pursuing work in the several schools of the College.
- 2. The needs of those who wish to enter upon careers as teachers of chemistry in secondary schools.
- 3. The requirements of students who wish a knowledge of the methods of work and application of the science on account of its relationship to their major work in other subjects, as, for example, agriculture, home economics, dairying, etc.
- 4. The needs of those who wish, after graduation, to do work leading to the master's degree here, or to prepare themselves for positions as analytical chemists.

The department is located in the Chemistry Building, which consists of two stories, basement and attic. One of the large, bright rooms on the first floor is fitted up for lectures and recitations. There is a lecture table conveniently equipped and arranged for demonstration and observation. The supply of apparatus and chemicals is quite extensive, and the student's interest in the subject is first aroused then encouraged and stimulated. The lecture room has a seating capacity of over one hundred. The remainder of the first floor is taken up with laboratories and balance rooms for quantitative work.

On the second floor there are three laboratories for introductory work. Each of these is equipped for a total of seventy-two workers, and will accommodate twenty-four students at a time; a central store room opens into all three. During the working period there is an instructor in each laboratory and an advanced student in the store room. This arrangement has proved very efficient for laboratory instruction. All desks are so equipped with bottles of reagents and with apparatus as to minimize the

loss of time incident to a student leaving his desk for these articles; and even in the case of more expensive instruments, materials and models for advanced students, every effort is made to keep on hand a supply that will meet all reasonable demands and prevent the serious loss of time and enthusiasm on the part of the student.

In the attic there are the general store rooms for apparatus and chemicals. These communicate with and supply the special store rooms and laboratories below by means of an elevator.

The building is heated by steam and lighted by electricity. Gas for experimental purposes is supplied by a Tirrell equalizing gas machine, and each laboratory desk is provided with both gas and water.

In general it may be said that it is the policy of the department to maintain at all times those conditions which promote orderly and serious work, and which cultivate a pleasurable interest in scientific experimentation.

# **SUBJECTS**

101 Elementary General Chemistry. Class 3 hours, laboratory 4 hours. Credit 41/2.

Prerequisite: Ele. Phy.

Required of all Freshmen, and prerequisite for all other courses in the department.

An elementary study of the general principles of the science as exemplified in the preparation, examination of the properties, and consideration of the uses of the more important non-metals and their simple compounds. The derivation of formulas, the construction of equations, and the calculations based on them, are especially emphasized. Lectures, written exercises and individual laboratory work.

102 General Inorganic Chemistry. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Chem. 101 or its equivalent.

Required of all Freshmen .

A continuation of the work in Course 101, dealing with the metals and their compounds.

201 Qualitative Analysis. Class 2 hours, laboratory 6 hours. Credit 4. Prerequisite: Chem. 102.

Required of Sophomores in the courses in general and exact science in the School of Science and Literature.

A detailed consideration of such principles of general chemistry as solution, ionization, chemical equilibrium, precipitation, etc., with their application to the separation and recognition of the more important positive and negative ions, both in pure substances and in mixtures. Lectures, written exercises, quizzes, and laboratory work.

205 Elementary Organic Chemistry. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Chem. 102.

Required of Sophomores in the Schools of Agriculture and Home Economics.

An introductory course dealing with the sources, methods of preparation, properties, and classification of the chief groups of organic compounds of the alipathic series; their uses and their relationships to the fats and carbohydrates. Lectures, written exercises and laboratory work.

206 Quantitative Agricultural Chemistry. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Chem. 201, 205.

Required of Sophomores in the School of Agriculture.

An elementary study of the simpler quantitative methods, involving the care and use of the analytical balance, exercises in the gravimetric and volumetric analysis of pure substances of known composition, the preparation and standardization of volumetric solutions, constant practice with equations representing the reactions employed, and with the calculations based on them. The composition of the atmosphere and its relation to plant growth, the analysis of soils, fertilizers and plant products. Lectures, reports, written exercises and laboratory work.

207 Qualitative Analysis. Class 1 hour, laboratory 3 hours. Credit 2. Prerequisite: Chem. 102.

Required of Sophomores in the Schools of Agriculture and Home Economics.

A briefer course dealing with the same subject matter and employing the methods indicated under 201.

208 Elementary Food Chemistry. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Chem. 205, 207.

Required of Sophomores in the School of Home Economics.

A course dealing with the quantitative methods employed in the study of the materials intimately related to daily life. Air, water and the more common food materials are made the subject of numerous experiments to illustrate their composition and properties. The estimation of chemical compounds in food products is especially emphasized.

210 General Quantitative Analysis. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Chem. 201.

Required of Sophomores in the courses in general and exact science in the School of Science and Literature.

A general study of the fundamental analytical methods, both gravimetric and volumetric, but without reference to any specific industry. Methods as in 206.

304 Advanced Quantitative Analysis. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Quantitative analysis and organic chemistry.

Required of Juniors in the courses in general and exact science in the School of Science and Literature. Offered to others prepared to take the work.

A selected series of determinations designed to familiarize the student with accuracy in analytical work, and to furnish him with suitable methods for a variety of fundamental operations required in any advanced work in chemistry.

305 General Organic Chemistry. Class 3 hours, laboratory 7 hours. Credit 51/3.

Prerequisite: Chem. 201 or its equivalent. Quantitative work is desirable though not absolutely essential.

Required of Juniors in the courses in general and exact science in the School of Science and Literature.

A systematic study of the general principles of organic chemistry as illustrated by the discussion and preparation of the more important class types of both the aliphatic and aromatic series of compounds. Special attention is drawn to those compounds that have commercial importance as well as purely scientific interest, thus enabling the student to see the relationship between this science and other fields of knowledge.

310 Food Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Organic chemistry and quantitative analysis.

Elective for Juniors and Seniors in the School of Science and Literature, and offered to all who are prepared to take the work.

The qualitative and quantitative analysis of food materials; the detection and estimation of impurities, adulterants, coloring matter, etc., in accordance with the methods employed in the State and Federal Government service.

311-312 Advanced Organic Chemistry. Class 3 hours, laboratory 4 hours. Credit 4½.

Prerequisite: Organic chemistry and quantitative analysis.

Elective for Juniors and Seniors in the School of Science and Literature, and offered to all who are prepared to take the work.

A course arranged for those who desire a more extended knowledge of organic chemistry than is provided in the courses described above. The class work involves the discussion of the chemical behavior and the characteristic reactions of the different classes of organic compounds, the synthetic methods by which they can be prepared, and the methods by which one class can be converted into another. The laboratory work will include the preparation and analysis of selected compounds.

313-314 Physiological Chemistry. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: General and organic chemistry. Analytical experience is highly desirable.

Elective for Juniors and Seniors in the Schools of Science and Literature and of Home Economics, and offered to all students prepared to take the work.

A study of the synthetic and analytical reactions that accompany the physiological changes in animals and plants. The chemical properties of food and body substances and their general and specific characteristics; the behavior of enzymes and their functions; the changes that take place in digestion, assimilation and elimination are among the topics considered.

322 Determinative Mineralogy and Blowpipe Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Chem. 207.

Required of Juniors in the Division of Civil Engineering.

A study of the physical properties of typical mineral species, and of the dry reactions of the elements, with their application to the identification of unknown minerals.

321 Geology. Class 2 hours. Credit 2.

Prerequisite: General chemistry.

Required of Sophomores in the course in general literature and seniors in the course in exact science in the School of Science and Literature, and of Juniors in the Division of Civil Engineering.

An introductory course including an elementary study of constructive and destructive forces, the origin of the soil, the materials of the earth's crust and the manner of their occurrence, the chemical and mechanical changes brought about by geological agencies, and the surface features to which they give rise.

401 Advanced Inorganic Chemistry. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: General chemistry and two semesters of analytical work.

Required of Seniors in the course in exact science in the School of Science and Literature, and elective for others prepared to take the work.

A critical review of the reactions and theories studied in the elementary courses. Laboratory practice in the preparation of pure compounds from crude materials.

402 Physical Chemistry. Class 2 hours, laboratory 6 hours. Credit 4. Prerequisite: Organic chemistry and quantitative analysis.

Required of Seniors in the course in exact science, and offered to all students prepared to take the work.

A discussion of the laws of gases, the kinetic theory, the phase rule, optical activity, and related topics; with laboratory practice in the determination of vapor densities, molecular weights by the freezing and boiling point methods, calculation of the degree of ionization, estimation of optical activity.

404 Special Methods in Quantitative Analysis. Class 1 hour, laboratory 4 hours. Credit 2½.

Prerequisite: Organic chemistry and quantitative analysis.

Elective for Juniors and Seniors in the School of Science and Literature, and offered to all students prepared to take the work.

The technical methods employed in the analysis of such raw materials and industrial products as water, gas, iron and steel, special minerals, fuels, oils, etc.

420 Teaching of Chemistry. Class 1 hour. Credit 1.

Required of Seniors in the course in exact science in the School of Science and Literature, and elective for all others who have a sufficient knowledge of the subject matter under discussion.

A series of conferences in which the methods and procedure in teaching general chemistry will be discussed in detail. Selections of subject matter for class work and laboratory exercises, apparatus and equipment for class demonstrations, relation of class and laboratory work, choice of text and reference books, etc.

421-422 Master's Thesis. Class 1 hour, laboratory 8 hours. Credit 32/3.

The work under this head will chiefly consist of a problem for solution by the student. Each such problem will involve about a year of careful experimental study, together with collateral reading and occasional conferences. The work is intended to cultivate the powers of the student, more particularly his self-reliance, his ability to do independent work, and familiarity with the interpretation of experimental results.

#### DEPARTMENT OF ENTOMOLOGY

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C. E. SANBORN, Professor H. R. PAINTER, Instructor WILLIAM EDGAR JACKSON, Graduate Student Assistant

301 Elementary Entomology. Class 2 hours, field and laboratory 4

hours. Credit 32/3.

An anatomical study of some of the typical insects; also the identification and grouping of the various kinds according to systematic relationships. Text: Hunter.

302 General Entomology. Class 3 hours, field and laboratory 2

hours. Credit 33/3.

A systematic study of insects and a study of their distribution, habits and methods of development, with a view of ascertaining methods of control.

Text: Sanderson.

304 Sanitary Entomology. Class 2 hours, field and laboratory 3

hours. Credit 3.

A brief, systematic study of insects and a study of their life histories, and the habits of forms which disseminate disease and infest the household.

Text: Herrick.

Horticultural Entomology. Class 2 hours, field and laboratory

4 hours. Credit 31/3.

Habits and distribution of orchard and garden insects, studied in such a way as to portray the most practical methods of controlling them.

Text: Sanderson and Jackson.

402 Apiculture. Class 3 hours, field and laboratory 2 hours. Credit  $3^{2/3}$ .

A general course in beekeeping.

Text: Root.

- 403 Advanced Entomology. Class 2 hours, field and laboratory 4 hours. Credit 3½.

  Subjects given by assignment.
- 404 Advanced Entomology. Class 2 hours, field and laboratory 4 hours. Credit 3<sup>1</sup>/<sub>3</sub>. Subjects given by assignment.

#### DEPARTMENT OF ENGLISH

N. W. ROCKEY, Associate Professor in Charge Albert H. Nelson, Assistant LAWRENCE A. WACHS, Assistant FEARN HAMILTON, Assistant

A number of improvements have been made recently which enable the Agricultural and Mechanical College to keep pace with the constantly increasing attention that is being paid to English in other institutions; large, beautiful recitation rooms have been given over to the use of this department, the teaching force in the department has been increased, and a large number of books for supplementary reading and reference have been added to the library. New courses adapted to the special needs of the students have been added.

The aim of the department is two-fold: (1) To create such a love in the student for the best literature that he shall continue to read and enjoy it after his school days are over; (2) to teach the student to express himself clearly and forcibly in writing and speaking.

# SUBJECTS

101, 102 Elements of Composition. Class 3 hours. Credit 3.

Prerequisite: Preparatory English.

This course consists principally of the study and practice of the principles of composition. Wooley's Handbook of Composition is studied and a thorough knowledge of the principles of grammar is essential. Frequent themes of various nature are required and a study of several classics is introduced. Emphasis is placed upon oral composition and individual conference and correction. All students must have access to an unabridged dictionary and are urged to possess a good, standard dictionary, such as the New International or the Standard.

105 American Writers. Class 5 hours. Credit 2.

Prerequisite: Preparatory English.

The literature itself is studied, but attention is given to the lives of the authors and to the time in which they lived in order that the students may better appreciate their work. Offered only in the Summer Term.

Text: Books adopted by the Oklahoma State Board of Educa-

tion, supplemented by texts from the College library.

## 201 Exposition and Argumentation. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

An advanced course in composition, supplemented by a study of examples taken from literature.

## 202 Description and Narration. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

An advanced course in composition, supplemented by a study of examples taken from literature.

## 203 News Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

A study of the elements of news writing and style form the basis of the work. Proper attention is given to writing leads, structure of news stories, reporting and gathering of news, interviewing, reporting speeches, and other forms of elementary journalism.

## 204 Magazine Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102, 203.

This course takes up the problem of turning scientific and technical information into practical articles for publication in magazines. Preparation of manuscripts and submitting them for acceptance forms part of the work.

#### 205, 206 Current Literature. Class 1 hour. Credit 1.

Prerequisite: 101, 102.

A course offered as an aid to more intelligent magazine reading and to stimulate an interest in the best current literature.

Text: Current magazines.

# 207, 208 Survey of English Literature. Class 3 hours. Credit 3.

Prerequisite: 101, 102.

A general survey. First semester work extends to the early Romantic Movement; second semester work, from Wordsworth to Stevenson. The principal study is of the literature itself, but enough attention is given to the life of the author and the times in which he lived to enable the student to appreciate his work and influence. It is an introduction to literature and literary criticism, and, although it is elective to advanced students, those electing it early in their course will be enabled to pursue the more advanced courses with greater profit and success.

Text: Twelve Centuries of English Poetry and Prose, New-comer and Andrews.

# 209 Technical Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

This is an advanced course in composition adapted to the interests and needs of engineering students.

# 301 Editorial and Publicity Work. Class 2 hours. Credit 2.

Prerequisite: 203, 204.

Copy prepared by students in course 203 is edited for publication in student papers. Practical work is given in editing, proofreading, makeup, along with special assignments in writing. Publicity work for the College is undertaken in connection with the course.

302 Feature and Publicity Writing. Class 2 hours. Credit 2.

Prerequisite: 203, 204, 301.

Writing feature articles for newspapers and magazines forms the basis of the work. Upon arrangement a separate section is formed for those interested in the short-story and offering Eng. 201, 202 as prerequisite. This takes up a study of the history, the structure and forms of the short story, the reading of short stories, and the writing of stories on assignment by the instructor. Editing for student publications and College publicity work is continued by those in that phase of the course.

## \*303, 304 American Literature. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

This course covers a history of American literature in a more intensive manner than is possible in secondary schools. Attention will be given to literary periods and to the writing of the lesser as well as the greater American authors. Some comparison is made with English literature.

## \*305, 306 English Language. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

A college course in the structure of language, and aimed to advance and deepen the student's knowledge of grammar. Some attention is given to the historical development of forms and to word study.

Text: A Brief History of the English Language, Emerson; Words and Their Ways, Greenough and Kittridge,

# 321b A Section of 321 in Fundamentals of Vocal Expression.

Optional with 223, 234, 321.

It is a course for women in expressional reading, and is open only by special arrangement.

# 401 Carlyle and Ruskin. Class 3 hours. Credit 3.

Prerequisite: Eng. 101, 102.

The assignment in this work varies from year to year. This year the following will be studied: Carlyle's "Sartor Resartus"; Ruskin's "Selected Essays". Although not a prerequisite, students should have had Eng. 207 and 208.

Text: For Carlyle, the Athenaeum edition.

## 402 Victorian Poets. Class 3 hours. Credit 3.

Prerequisite: Eng. 101, 102.

This course is designed to give students a comparatively thorough knowledge of one of the master poets of the Nineteenth Century. This does not exclude the consideration of other authors as an aid to the study of the author chosen. This year, Tennyson has been selected for intensive study. Although not a prerequisite, students should have had Eng. 207, 208.

# 403 Romantic Movement in English Poetry. Class 3 hours. Credit 3. Prerequisite: Eng. 101, 102.

About one-fourth of the time is devoted to Wordsworth, the remainder to Coleridge, Byron, Shelley and Keats. This course is sup-

<sup>\*</sup>Only one of the following subjects is offered in each year: Courses 303-304, 305-306, 405-406.

plemented by lectures and collateral readings, tracing the rise and development of the Romantic Movement. The work is based upon the complete work of each of the authors studied. By clubbing together the students have purchased the five volumes at less than fifty cents per volume. Although not a prerequisite, students should have had Eng. 207, 208.

404 Shakespeare and the Drama. Class 3 hours. Credit 3.

Prerequisite: Eng. 101, 102.

A study is made of the rise and development of the English drama, of the Elizabethan stage, and the conditions under which the great dramatist wrote. Specimens of early English plays and Shakespeare's plays are reported upon, and some attention is given to the later drama.

\*405, 406 The Novel. Class 2 hours. Credit 2.

Prerequisite: Eng. 101, 102.

In this course the development of the English novel into definiteness of form and purpose receives due emphasis, and the writers studied are treated as representative of the life, the thought and literary movements of the times in which they lived.

\*Only one of the following subjects is offered in each year: Courses 303-304, 305-306, 405-406.

#### DEPARTMENT OF MATHEMATICS

CARL GUNDERSON, Professor R. E. HARTSOCK, Associate Professor Z. N. HOLLER, Assistant Professor JOHN H. ANDREWS, Assistant

Work in college mathematics is required of all students in the School of Engineering and the School of Science and Literature.

Courses 105, 108, 207, 208 are required of engineers, 105, and 106 of Science and Literature students, 205 of civil engineers.

The other courses are elective.

# **SUBJECTS**

105 College Algebra. Class 4 hours. Credit 4.

Prerequisite: High school algebra and plane geometry.

Variables and functions; binomial theorem; progressions; complex numbers; logarithms; limits; permutations and combinations.

Text: Reitz and Grathorne.

106 Plane Trigonometry. Class 4 hours. Credit 4.

Prerequisite: Plane Geom. and Math. 105.

Work and text essentials same as in Math. 108, more time being given to problems.

108 Plane Trigonometry. Class 3 hours. Credit 3.

Prerequisite: Plane Geom. and Math. 105.

The development and use of trigonometric functions; relations between the functions; logarithms; solution of triangles; application to practical problems throughout the course.

Text: Ashton and Marsh.

207 Analytical Geometry and Calculus. Class 5 hours. Credit 5.

Prerequisite: Math. 106 or 108 and Solid Geom.

Cartesian and polar coordinates; equations and properties of straight lines and curves; the general equation of the second degree; introduction to analytical geometry of three dimensions; introduction to calculus; limits; infinitesimals; rates; maxima and minima; partial differentiation.

Text: Brief Course in Analytic Geometry, Fauner and Allen; Infinitesimal Calculus, Murray.

208 Calculus. Class 5 hours. Credit 5.

Prerequisite: Geom. 207.

Change of variable; integration; application of integration; multiple integrals; curvature; properties of curves; infinite series; Taylor's theorem, hyperbolic functions, indeterminate forms.

Text: Infinitesimal Calculus, Murray.

204 Astronomy. Class 2 hours. Credit 2.

Prerequisite: High school algebra and geometry.

The celestial sphere; reference lines and astronomical measurements; the solar system; laws of motion; evolution; stars; comets; nebulae: structure of the universe.

Text: Elements of Astronomy, Young.

205 Spherical Trigonometry. Class 1 hour. Credit 1.

Prerequisite: Solid Geom and Math. 108 or 106.

Right and quadrantal triangles; oblique triangles.

Text: Ashton and Marsh.

301 Differential Equations. Class 3 hours. Credit 3.

Prerequisite: Math. 208.

Solution of differential equations involving two variables.

Text: Murray.

302 Differential Equations. Class 3 hours. Credit 3.

Prerequisite: Math. 301.

Continuation of Math. 301; ordinary differential equations with more than two variables; partial differential equations.

Text: Murray.

# DEPARTMENT OF FOREIGN LANGUAGES

GUSTAV F. BROEMEL, Professor ALMON AI ARNOLD, Assistant GINO V. MEDICI DE SOLENNI, Assistant

The Secondary School of Oklahoma A. and M. College requires one year of any foreign language of all students except those who are preparing for the Schools of Commerce and Marketing or Agriculture, who may elect German. Students who are preparing for the School of Engineering must take two years of a foreign language.

The College offers a three year's course in Spanish, French or Latin, and a four year's course in German.

As to which courses are required, and which elective, see the courses of study outlined for each school.

The student is allowed to take that course for which he is prepared.

At least one year of a foreign language is to be acquired by a student before obtaining a master's degree. Any course in language above the first two years can be counted as a credit toward this degree.

# **SUBJECTS**

#### GERMAN

101 Beginners' Course. Class 3 hours. Credit 3.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Written and oral translations from English to German. Conversation.

Text: Paul V. Bacon's Elements of German and Vorwaerts.

102 Beginners' Course. Class 3 hours. Credit 3.

Prerequisite: Ger. 101. Continuation of Course 101.

Text: Same as 101.

201 Advanced Reading Course. Class 3 hours. Credit 3.

Prerequisite: One year of German.

Syntax is reviewed and studied more intensively. One hour a week will be given to composition. Reading of about two hundred pages of prose.

Text: German Composition, Paul V. Bacon; Storm's Immensee; Zschokke's Der Zerbrochene Krug.

202 Advanced Reading Course. Class 3 hours. Credit 3.

Prerequisite: Ger. 201.

One hour a week composition. Reading of about two hundred pages of prose.

Text: German Composition, Paul V. Bacon; Meyer-Forster's Karl Heinrich.

301 Masterpieces in German Drama and Novel. Class 3 hours. Credit 3.

Prerequisite: Ger. 202.

Reading occupies most of the time. Composition is continued. Collateral readings.

Text: German Composition, Harris; Felix Dalm's Ein Kampf um Rom; Goethe's Hermann und Dorothea. Texts vary. 302 Masterpieces in German Drama and Novel. Class 3 hours. Credit 3.

Prerequisite: Ger. 301. Continuation of Course 301.

Text: Gustav Freytag; Soll und Haben Schoffel; Der Trompeter von Saekkingen. Collateral readings. Texts vary.

303 Scientific German. Class 3 hours. Credit 3.

Prerequisite: Ger. 202.

Reading of technical and scientific German,

Text: Die Walt der Technik.

304 Scientific German. Class 3 hours. Credit 3.

Prerequisite: Ger. 303. Continuation of Course 303.

Text: Technical and Scientific German, Greenfield,

401 Schiller, Class 3 hours, Credit 3.

Prerequisite: Ger. 302.

Intensive study from the literary and cultural side of a number of carefully chosen dramas. Essays in German based on the texts. Collateral readings. Course is conducted in German.

Text: Jungfrau von Orleans und Marie Stuart, or Brant von

Messina und Wallenstein.

402 Goethe. Class 3 hours. Credit 3.

Prerequisite: Ger. 401.

Lectures on Goethe's life and works; study of Goethe's prose, poetry and drama; essays written in German. Collateral readings. Course is conducted in German.

Text: Faust (Part I), and Egmont.

403 Advanced Scientific German. Class 2 hours. Credit 2.

Prerequisite: Ger. 303.

Reading of technical and scientific magazines.

404 Advanced Scientific German. Class 2 hours. Credit 2.

Prerequisite: Ger. 403.

Reading of technical and scientific magazines.

501 Advanced Composition and Conversation. Class 3 hours. Credit 3.

Prerequisite: Ger. 302.

This course is intended for students who are planning to become teachers of German.

Text: Schiller's Ballads and Lyrics.

502 Advanced Composition and Conversation. Class 3 hours. Credit 3.

Prerequisite: Ger. 501. Continuation of Course 501.

Text: Aus dem Deutchen Dichterwald.

#### FRENCH

101 Elementary Course. Class 3 hours. Credit 3.

Essentials of French grammar; the more common irregular verbs. Careful training in pronunciation.

Text: Olmsted's Elementary French Grammar.

102 Elementary Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 101.

Continuation of Course 101.

Reading of about three hundred pages of modern prose. Emphasis on irregular verbs, idioms and translation of easy French at sight.

Text: Olmsted's Elementary French Grammar; Francois and Giraud's Simple French; Labiche's Le Voyage de Monsieur Perichon.

201 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 102.

Advanced prose composition, reading of standard authors.

Text: François' Advanced Prose Composition; Merimee's Colomba; Beaumarchais' Le Barbier de Seville. Collateral readings.

202 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 201.

Continuation of Course 201.

Text: François' Advanced French Composition; Victor Hugo's Les Miserables; Loti's Pecheur d' Islande.

203 Scientific French. Class 2 hours. Credit 2.

Prerequisite: Fr. 102.

Reading of technical and scientific French.
Text: Bowen's Elementary Scientific Reader.

204 Scientific French. Class 2 hours. Credit 2.

Continuation of Course 203.

Text: French scientific magazines.

301 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 202.

A careful study of the tragedies of Racine and Corneille. Collateral readings.

Text: Corneille's Le Cid, Horage, etc.

302 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 301.

A study of the drama in the Eighteenth Century. Collateral readings.

Text: Marivaux's Comedies; Voltaire's Zaire.

#### SPANISH

101 Elementary Course. Class 3 hours. Credit 3.

Mastery of the forms of grammar; careful treatment of the pronunciation, emphasis on the most important irregular verbs.

Text: A Brief Spanish Grammar by Ingraham-Edgren.

102 Elementary Course. Class 3 hours, Credit 3.

Prerequisite: Course 101.

Emphasis on irregular verbs and most common idioms. Reading of about three hundred pages of modern prose.

Text: Hill's Spanish Tales.

201 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 102.

Advanced prose composition; reading of standard authors.

Text: Humphrey's Spanish Prose Composition; Johnson's Cuentos Modernos; Hartzenbush's La Coja y El Encogido.

202 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 201.

Continuation of Course 201.

Text: Harrison's Spanish Commercial Reader; Harrison's Spanish Correspondence; Spanish magazines and reviews.

301 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 202.

Letter writing and conversation.

Texts vary.

302 Advanced Course. Class 3 hours, Credit 3.

Prerequisite: Sp. 301.

Continuation of Course 301.

Texts vary.

#### LATIN

101 Caesar. Class 3 hours. Credit 3.

Prerequisite: One year of Latin.

Three books of the Gallic War are read. Methods of translation are carefully taught until the student reaches the point where diligence alone will give mastery. Constant drills in forms, syntax and pronunciation.

Text: Any text in Caesar.

102 Caesar. Class 3 hours. Credit 3.

Prerequisite: Latin 101.

Two more books of the Gallic War are read. Drill in sight reading. One hour a week is devoted to prose composition.

Text: Daniels' Composition.

201 Cicero's Letters and Orations. Class 3 hours. Credit 3.

Prerequisite: Latin 102.

A reading course with special attention to the life and personality of Cicero.

202 Cicero's Essays. Class 3 hours. Credit 3.

Prerequisite: Latin 201.

A study of the life, personality and philosophy of Cicero. Study of Cicero's style and prose composition.

Text: Cicero's De Senectute, De amicitia.

301 Virgil. Class 3 hours. Credit 3.

Prerequisite: Latin 202.

The first three books of the Aeneid; lectures on the meter.

302 Roman Historians to Tacitus. Class 3 hours. Credit 3.

Prerequisite: Latin 301.

A reading course of selections from Nepos, Sallust, Livy and Tacitus.

401 Horace's Odes and Epodes. Class 3 hours. Credit 3.

Prerequisite: Latin 202.

Memorizing of at least six odes. Discussion of Roman lyric poetry.

402 Teachers' Course. Class 3 hours. Credit 3.

Prerequisite: Latin 202.

Lectures on bibliography and on methods of teaching elementary Latin. Discussions of standard elementary texts.

## DEPARTMENT OF DRAWING AND ART WORK

ADA HAHN, Professor C. M. Edson, Assistant

The aim of the courses in this department is to give training that is necessary for use in the practicum subjects of the College.

In the Freshman year the drawing is so planned as to afford the same work for all students in courses where drawing is taken, giving the elementary principles and their application in matters of everyday life.

In the School of Home Economics a study is made of the principles of space and color harmony with regard to their use in interior and exterior decoration of homes and costumes.

The object of the work is to develop an appreciation of good form and color, and to enable the student to exercise a more intelligent and sensitive discrimination in their use. Emphasis is laid upon well chosen and inexpensive decoration.

# SUBJECTS

- 101 Freehand Drawing. Practice 2 hours. Credit 3/3.
- 102 Freehand Drawing. Practice 2 hours. Credit <sup>2</sup>/<sub>3</sub>. Prerequisite: Draw, 101.
- 103 Freehand Drawing. Practice 4 hours. Credit 11/3.
- 201 Design and Color. Class 1 hour, practice 2 hours. Credit 13/3. Prerequisite: Draw. 102.

- 202 Design and Color. Class 1 hour, practice 2 hours. Credit 1%. Prerequisite: Draw. 201.
- 301 Water Color Drawing. Practice 4 hours. Credit 1½. Prerequisite: Draw. 101.
- 303 Applied Arts and Woodcarving. Class 2 hours, practice 2 hours. Credit 23/3.

  Prerequisite: Draw. 102.

304 Applied Arts and Woodcarving. Class 2 hours, practice 2 hours. Credit 23.

Prerequisite: Draw. 303.

305 China Painting.

Elective to all students without credit.

#### DEPARTMENT OF HISTORY

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S. A. MARONEY, Professor

The study of history has two distinct but not incompatible aims. One of these is personal culture, the other is practical vocational value. Each of these standards is sought in both method and matter in different proportions to suit the various courses of the Agricultural and Mechanical College. The amount of work offered is limited to the technological character of the curriculum. The newer conceptions of history prevail, which treat the subject more for thought than for memory of facts, minimize the wars, and stress ethical, political and industrial features. Special adaptations are made to reinforce the College work in agriculture and home economics. The College library contains many valuable sets of reference works which are being added to from time to time.

The department has charge of the history in the Secondary School. For courses in History 21, 22, 31, 32 and 34 see Secondary School.

# **SUBJECTS**

203, 301 History of England. (a) Class 3 hours. Credit 3.

Rise of English nation, with particular attention to the growth of Anglo Saxon forms of government, advancement in democracy, and industrial revolution, as roots of modern institutions. British colonial, naval and commercial growth. British social legislation. Gives background of English literature. (a) To Restoration, 302 since Restoration.

201 History of the United States. (a) Class 3 hours. Credit 3.

202, 308 History of the United States. (b) Class 3 hours. Credit 3.

(a) To presidency of Andrew Jackson. Colonial period treated as introductory. Steps toward national unity in Revolution, critical period, and by operation of Constitution the dominant theme. Social, industrial and educational features given due but secondary consideration.

Prerequisite: Am. Hist. 31 in Secondary School, or equivalent.

(b) Continuation of 201. To date. Political history basic. More attention than usual to financial and social phases. Enlarged governmental activities, Federal and State, definitely handled. Connects past to present and gives insight into present day problems. Current history noted. Collateral reading.

401 Modern Europe. (a) Class 3 hours. Credit 3.

404 Modern Europe. (b) Class 3 hours. Credit 3.

(a) Charlemagne to close of Napoleonic era. Medieval portions used as introductory sketch for more thorough treatment of later part. Conception of rise of nations, the papacy, church, feudalism and rennaissance and reformation. Library reference.

(b) A continuation of (a), from close of Napoleonic era to present. Political and social development. Leads to understanding of continental conditions preceding the Great War. Finishes with the

Great War and its implications.

306 Industrial History of the United States. Class 2 hours. Credit 2.

Emphasizes the economic side of our national growth rather than the political development. History of different industries, periods and movements, and survey of conditions of today are divisions of course. Some adaptations and applications to agriculture and home economics. Work strengthened by lantern lectures.

# DEPARTMENT OF PHYSICS

J. GARRETT KEMP, Professor W. P. ANGEL, Assistant

Physics is the basic science which includes the fundamental laws and principles involved in all physical changes. The courses which follow give both a theoretical and practical treatment of the subject. Instruction is based on the material contained in carefully selected textbooks. This is supplemented by lectures illustrated by demonstrations and by lantern slides. The purpose is to give a training in exact reasoning, and a knowledge of principles that will aid in the solution of both scientific problems and those encountered in everyday life.

The laboratory work gives the student an opportunity to test the principal laws of the science. Special attention has been given to equipping the laboratory with modern apparatus which will give consistent experimental results. This work is carefully coordinated with the work of the classroom, and should enable the student to acquire skill in the manipulation and care of delicate apparatus.

The lecture room is provided with terraced seats which permit the students to see demonstrations performed on the lecture table. It is equipped with a combination lantern slide and opaque projectoscope which is used in illustrated lectures. The laboratory is well arranged for work, and the equipment provided is of such a nature that it meets the requirements of the different courses.

# **SUBJECTS**

- 103 Physics (Elementary)—Mechanics, Heat and Sound. Class 2 hours, laboratory 4 hours. Credit 3½.
  Text: Carhart's College Physics.
- 201 Engineering Physics—Mechanics, Heat and Sound. Class 4 hours, laboratory 3 hours. Credit 5.
  Prerequisite: Math. 101, 107, 108.
  Text: Duff's.
- 202 Engineering Physics—Magnetism, Electricity and Light. Class 4 hours, laboratory 3 hours. Credit 5.
  Prerequisite: Phy. 201 or its equivalent.
  Text: Duff's.
- 203 General Physics—Mechanics, Heat and Sound. Class 3 hours, laboratory 3 hours. Credit 4.

  Prerequisite: Math. 101, 107, 108.

  Text: Duff's.
- 204 General Physics—Magnetism, Electricity and Light. Class 3 hours, laboratory 3 hours. Credit 4.
  Prerequisite: Phy. 203 or its equivalent.
  Text: Duff's.
- 303 Advanced Physics—Mechanics and Sound. Class 3 hours, laboratory 3 hours. Credit 4.

  Prerequisite: Phy. 203 or its equivalent.
- 304 Advanced Physics—Heat and Thermodynamics. Class 3 hours, laboratory 3 hours. Credit 4.

  Prerequisite: Phy. 204 or its equivalent.
- 403 Advanced Physics—Magnetism, Electricity and Radio-Activity. Class 3 hours, laboratory 3 hours. Credit 4.

  Prerequisite: Phy. 303 or its equivalent.
- 404 Advanced Physics—Light and Radiation. Class 3 hours, laboratory 3 hours. Credit 4.

  Prerequisite: Phy. 403 or its equivalent.

#### DEPARTMENT OF BOTANY

CHAS. O. CHAMBERS, Professor C. D. LEARN, Assistant

This department occupies rooms in Morrill Hall and is now fairly well equipped with new microscopes, reagents and other necessary paraphernalia. The loss occasioned by the fire of August 7, 1914, amounting to over \$15,000.00, has been partially restored by the expenditure of some \$1,500.00 in equipment during the present year, in addition to a similar amount spent the previous year. The nucleus of a new herbarium to replace the loss occasioned by the great fire is now under way.

# **SUBJECTS**

101 General Botany. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Bot. 22.

The principles of plant structures studied from the standpoint of function; an introduction to physiology, genetics and ecology.

Text: College Botany, Atkinson.

102 General Botany. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Bot. 101.

General morphology of the principal natural groups of plants from the standpoint of evolution from lower to higher forms, their structure, habits and relationships; an introduction to systematic botany.

Text: College Botany, Atkinson.

204 Plant Physiology. Class 2 hours, laboratory 2 hours. Credit 2<sup>2</sup>/<sub>3</sub>. Prerequisite: Bot. 101, 102.

A study of the vital processes in higher plants. Text: Plant Physiology, Barnes or Duggar.

206 Systematic Botany. Class 1 hour, laboratory 6 hours. Credit 3. Prerequisite: Bot. 101, 102.

A taxonomic study of flowering plants.

Text: Manual of Botany, Gray (Seventh Edition).

305 Pathology. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Bot. 101, 102, 204.

A study of fungous diseases, both host and parasite. Text: Fungous Diseases of Plants, Duggar.

303 Genetics. Class 3 hours. Credit 3.

Prerequisite: Bot. 101, 102, Alg.

A study of the principles of biametrics and their application to plant breeding and selection.

Text: Genetics, Walter.

401 Special Systematic Botany. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Bot. 206.

A continuation of 206, with special emphasis on economic groups. Text: Manual of Botany, Gray (Seventh Edition).

404 Economic Botany. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: Bot. 101, 102, 204, 206.

A microscopic study of various economic plants, their food products and adulterants; the reserve food of plants, its form and use; a systematic study of economic groups of plants and their place in cultivation.

Text: Economic Botany, Kraemer.

403 Cytology and Technique. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Bot. 101, 102, 204, 206.

A study of the cell and histological methods; fixing, staining of plant tissues and preparation of microscopic slides.

Text: Plant Anatomy, Stevens.

402 Morphology of Higher Plants. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: All preceding botany.

A histological study of the higher plants.

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## DEPARTMENT OF PUBLIC SPEAKING

I. SAMUELS, Assistant Professor in Charge

It is the effort of the Department of Public Speaking to correlate the training in public speaking with the work in all the other departments of the College. Students in agriculture are trained in the presentation and discussion of agricultural facts before supposed audiences of farmers. Students of home economics, engineering, etc., are trained in speaking on subject matter relating to their respective courses of study, and to their probable needs and activities in later life. Conviction, not entertainment, is the primary aim in each case.

As a supplement to the class work in all courses, students are required to attend and report upon the public speaking contests held during the session. Students who desire practice in public speaking in addition to that offered in the classroom are advised to join a literary society and take part in the debates and oratorical contests provided by the Oratorical Association.

# **SUBJECTS**

123 Essentials of Public Speaking. Class 1 hour, practice 2 hours. Credit 13/3.

This is an elemental course and a prerequisite to all other work in public speaking. The fundamentals aimed at are as follows: Thought conception, power of analysis, mental grasp, self-control before the public, and effective delivery of a definite message. Incidentally such technique as the voice demands, together with the correction of platform bearing, completes the course. The work is developed by practical exercises and short, original speeches.

221 Practical Public Speaking. Class 1 hour, practice 2 hours. Credit 1%.

Prerequisite: Pub. Spk. 123.

Training in the use of the voice, enunciation, gesture and general platform deportment. The aim of this course is to teach students by practical platform experience how to speak effectively. Extemporaneous speaking is especially stressed.

222 Debating. Class 1 hour, practice 2 hours. Credit 13/3.

Prerequisite: Pub. Spk. 123.

Practical work is given in analysis, the collection and handling of evidence, brief drawing and oral debating. Students appear in debate before the class. Methods of proof and refutation are studied, together with the elements of effective presentation upon the platform.

321 Forms of Public Address. Class 1 hour, practice 2 hours. Credit 12/4.

Prerequisite: Pub. Spk. 123.

This course deals with the structure of the more important kinds of public addresses, including the eulogy, after-dinner speech, political speech, and speeches for special occasions. Practice will be given in the composition and presentation of these forms.

## THE SCHOOL OF EDUCATION

JOHN H. BOWERS, Dean

The literary, scientific and industrial work required of the students in the School of Education is done in those departments of the College having special facilities and equipment for teaching these branches efficiently and with greatest economy to the prospective teacher. And the special method of teaching these subjects in high school is also given in special courses in their respective departments.

# B. S. Degree and State Life Certificate

Students who complete the full four years' course in the School of Education receive a Bachelor of Science degree and a State Life Certificate in Oklahoma. Teachers' certificates will be granted by the regular authorities for granting such certificates, State, county or city, to students who have done work at the A. and M. College on the same conditions as for work done at the State University or at the State Normal Schools.

#### Short Courses for Teachers' Certificates

Those who desire to prepare for teaching and do not desire to take the full your years' course can attend the College one or more terms and elect such studies as are necessary to secure the particular certificate which they desire. When a subject is completed at the College the certificate granting authorities of the State accept that credit instead of an examination. All subjects required for teachers' certificates are offered some time during the College year, and all such subjects are offered during the Summer School. Those who complete the Sophomore year may secure a teacher's certificate valid for two years, provided three semesters of educational subjects are included.

## Special Courses for Rural Teachers

The College offers excellent opportunities for those who are preparing to teach in the rural schools. The College instructors understand and appreciate the needs of country life and certain specialists in the College devote their best efforts to the problems of rural welfare.

## Requirements for Graduation

The candidate for graduation from the School of Education, in addition to the subjects required for a State permanent certificate, must select a major group of studies, such as Biological Sciences, Physical Sciences, Social Sciences, Economics, History, English, Foreign Languages, Agriculture, Home Economics. Preparation may also be made for teaching Manual Training, Music and Commercial subjects. During the Senior year one hour of practice teaching and one hour of theory of teaching the major subject will be required.

#### COURSES IN THE SCHOOL OF EDUCATION

The following outline of study represents the required and elective work in the School of Education. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject, and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate, a student must earn 36 credits per year in Freshman and Sophomore years, and 32 credits per year in the Junior and Senior years, or a total of 136 credits, including credit given for military science and physical training. Students will not be allowed to register in fewer than fifteen nor more than twenty credit hours, except by special permission. Sophomore electives are open to Juniors and Seniors where the necessary prerequisite work is taken. Both Junior and Senior electives are open to either Juniors or Seniors.

In the outline below figures without parenthesis indicate hours of

classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER			
	Hours.	Credit.	H	lours.	Credit.
Eng. 101, Elements of Composition			Eng. 102, Elements of Composition 3		
		3	Composition 3		3
Chem. 101, Inorganic		4 1-3	Chem. 102, Inorganic 2	(4)	3 1-3
Pub. Spk. 123, Essentials	1 (2)	1 2-3	Draw, 102, Freehand	(2)	2-3
Draw, 101, Freehand	(2)	2-3	Edu. 102, Principles of	` ′	
Edu. 101, Psychology	2	2	Education 2		2
Physical Education			Physical Education	(3)	
		1	Mil. Sci. (Men)		1
Mil. Sci. (Men) H. E. 103, Survey	1	1	Electives (approx.) 8	(-)	8
Electives (approx.)	5	5	and the control of th		

#### SUGGESTED FRESHMAN ELECTIVES

FIRST SEMESTER	SECOND SEMESTER
Hours. Cree	
Agriculture or Home Economics or Manual Training	Agriculture or Home Economics or Manual Training

#### SOPHOMORE YEAR

FIRST SEMESTER	SECOND SEMESTER		
Eng. 201, Exposition & Argumentation or	Eng. 202, Description & Hours. Credit. Narrative or		
Eng. 203, News Writing 2 2 Phy. 203, General	Eng. 204, Magazine Writing		
Phy. 201, Engineering or Bot. 101, General	agement 2 2 Phy. 204, General		
Edu. 201, History of Modern Education 2 Electives (approx.) 9	Phy. 202, Engineering Electives (approx.) 9 Mil. Sci. (Men) (3)		
Mil. Sci. (Men)	Physical Education (Women) (3)		

## SUGGESTED SOPHOMORE ELECTIVES

SUGGESTED SUPHU	MORE ELECTIVES		
FIRST SEMESTER	SECOND SEMESTER		
Hours. Credit.   3 (4)   4 1-3	Hours. Credit.  Eng. 208, English Literature 3 3 3  Pub. Spk. 222, Debating 1 (2) 1 2-3  Hist, 204, United States 3 3  Chem. 210, General Quantitative 2 (6) 4  Math. 204, Astronomy 2 2  Math. 208, Calculus 5  Foreign Language 3 3  Agriculture or Home Economics or Manual Training or Other Vocational Work		
JUNIOR			
FIRST SEMESTER	SECOND SEMESTER		
Edu. 301, Psychology 3 3 Edu. 308, Child Study 2 2	Edu. 302, Applied Psychology		
SUGGESTED JUN			
FIRST SEMESTER	SECOND SEMESTER		
Hours, Credit.	House Credit		
Foreign Language	Foreign Language 3 Chem. 208. Elementary		
ganic 3 (7) 5 1-3 Hist. 305, English 3 3 Soc. Sci. 301, Sociology. 2 2 Eng. 303, American Lit-	Food		
Eng. 303, American Literature 2 2 Agriculture	Eng. 304. American Literature 2 2 Agriculture 2		
Home Economics	Home Economics		
Other Vocational Work	Other Vocational Work		
SENIOR	YEAR		
FIRST SEMESTER	SECOND SEMESTER		
Hours, Credit.	Edu 406 Logie Hours. Credit.		
Edu. 405, Ethics	Edu. 406, Logic		
Education 2 2	& Supervision 2 2		
SUGGESTED SENIOR ELECTIVES			
FIRST SEMESTER	SECOND SEMESTER		
Hist. 401, Modern Eu-	Hist. 404, Modern Eu-		
rope	rone 3 3		
rope	Eng. 406, The Novel 2 2 Enty. 402, Apiculture 3 (2) 3 2-3 Zool. 402, Embryology 2 (4) 3 1-3 Bact. 402, Sanitary Sci-		
ology 2 (4) 31-3 Bact. 401, Sanitary 2 (4) 31-3 Soc. Sci. 401, Govern-			
Soc. Sci. 401, Govern-	Soc. Sci. 402. Political		
ment 2 Foreign Language 3 Agriculture	Theory 2 2 Foreign Language 3 3 Agriculture or		
Home Economics	Home Economics		
Other Vocational Work	Other Vocational Work		

The candidate for graduation from the School of Education must have good foundation work in the Biological Sciences; Botany, Zoology, Physiology are recommended.

Electives in Agriculture, Agronomy, Dairying, Horticulture, Entomology, Animal Husbandry, will be found by referring to the courses of study in the School of Agriculture. Students in the School of Education may elect any subject in the School of Agriculture for which they have the prerequisite.

Electives in Home Economics, Domestic Science and Domestic Art will be found in the School of Home Economics. Students in the School of Education may elect any subject in Home Economics for which they have the prerequisite.

A grade in Agriculture is required for a State life certificate, and to meet this requirement, men will be expected to take at least two semesters' work in Agriculture, and they are advised, if possible, to begin the election of Agriculture in the Freshman year.

A grade in Domestic Science is required for a State life certificate, and women will be expected to take at least two semesters' work in Home Economics, which work they are advised to begin electing in the Freshman year, or as early as possible.

# DEPARTMENT OF EDUCATION AND SOCIAL SCIENCE

JOHN H. BOWERS, Professor CHAS. W. BRILES, Associate Professor

EDUCATION

# 101 Psychology. Class 2 hours. Credit 2.

The aim of this course is to teach the fundamental principles of psychology as a preparation for successful study and profitable school work, to teach the conditions, processes and laws of mental development and the motives and forces that give rise to human conduct.

# 102 Principles of Education. Class 2 hours. Credit 2.

This course deals with the general principles which underlie the work of teaching and of learning, and the application of such principles to educational processes. The content of this course is sometimes called Theory and Practice.

# 201 History of Modern Education. Class 2 hours. Credit 2.

The purpose of this course is to help arrive at correct notions of what ought to be done in the light of what has been done in education, and to study the diversity of ideals and the best methods for future advancement. The lives and works of great educators is made a source of inspiration and guidance.

### 202 Methods and Management. Class 2 hours. Credit 2.

The methods of teaching the different school subjects will be presented along with classroom management. Conducting the recitation, governing the school and securing cooperation and like practical problems will be discussed.

## 301 Psychology. Class 3 hours. Credit 3.

This course will give the fundamentals of physiological psychology, and a study of the main problems and methods of psychology, sensation, attention, habits, association of ideas, perception, memory, imagination, conception, judgment, reasoning, emotion, volition and personality.

### 302 Applied Psychology. Class 3 hours. Credit 3.

This course deals with the application of the laws and methods of psychology to problems of life and the work of teaching.

## 308 Child Study. Class 2 hours. Credit 2.

This course studies the aims and methods of child study, the problems of interest, personality and habit formation, the states of development in childhood and adolescence, and the problems of child welfare.

#### 307 Rural Education. Class 2 hours. Credit 2.

This course deals with the problems of rural school support, administration, supervision, management, and how to make the rural school meet the needs of rural life.

#### 405 Ethics and Moral Education. Class 2 hours. Credit 2.

The fundamental principles of the moral life are studied along with the moral ideals and methods of the individual, the family, the state and other social institutions. The aim is to understand such moral principles as will promote both individual and social welfare, and how these principles operate in character building and in school work.

## 406 Logic and the Learning Process. Class 2 hours. Credit 2.

A study of the laws of thinking and the processes of true reasoning. Common errors in thinking with the causes for such errors are pointed out, and also guiding principles for correct thinking processes, and for scientific study and investigation.

# 407 Philosophy of Education. Class 2 hours. Credit 2.

A brief study of educational aims and values, such as vocational education, social education, disciplinary education, cultural education, health education, moral education, and the best means of attaining these ends in the schools.

# 408 School Administration and Supervision. Class 2 hours. Credit 2.

A study of the curriculum, organization, finance and administration of country schools, town schools and city schools, and the powers and duties of school executives.

## 430 Educational Measurements. Class 2 hours. Credit 2.

A study of the Courtis tests in reading, writing and arithmetic; Hillegas' tests in composition; the Ayers and Thorndike tests in writing; and a study of the general problems of determining standards of attainment.

301 Sociology and Social Welfare. Class 2 hours. Credit 2.

A brief study of the conditions of social life, social psychology, social organizations, social development, social control, social institutions, and the factors involved in social progress and social welfare.

304 Social Problems. Class 2 hours. Credit 2.

A study of rural social life and rural welfare along with the problems of poverty, public health, social insurance, and the legal and spiritual remedies for some of our greatest social defects.

401 Government and Political Methods. Class 2 hours. Credit 2.

The object is to teach the actual methods of self-government; to make an impartial study of the methods by which political parties organize and conduct their campaigns, along with the improvements that might be made in party methods and in actual government.

402 Political Theory. Class 2 hours. Credit 2.

A survey of the forms through which governments have evolved, of the principles of government, and of the actual practices of our American State and National Governments.

One of the courses in education to be taken by those who expect to teach in the public schools should be the theory and practice of teaching that subject which the student has chosen as his major.

Election may be made from the following courses:

**403 Agricultural Education.** Class 2 hours. Theory and practice teaching.

410 Manual Training Teaching. Class 2 hours. Theory and practice teaching.

411 Home Economics Teaching. Class 2 hours. Theory and practice teaching.

412 Science Teaching. Class 2 hours. Theory and practice teaching.

414 Teaching Mathematics. Class 2 hours. Theory and practice.

415 History Teaching. Class 2 hours. Theory and practice.

416 English Teaching. Class 2 hours. Theory and practice.

417 Public School Drawing. Class 2 hours. Theory and practice teaching.

418 Public School Music Teaching. Class 2 hours. Theory and practice teaching.

419 Primary Teaching. Class 2 hours. Theory and practice.

## THE SCHOOL OF COMMERCE AND MARKETING

H. W. Moorhouse, Dean

The School of Commerce and Marketing offers two courses. A description of the two-year course in Business Training is found under the Department of Business Training.

#### The Four Years' Course

The four-year course in Commerce and Marketing is open to students presenting fifteen-unit credits for entrance and leads to a B. S. degree. For advance standing, application should be made to the dean of the school.

This course has been planned to give students an understanding of business and business relationships. Commerce, industry and trade have become so complex that men engaged in such activities must have a thorough knowledge of business methods and economic principles. Commerce, which was once limited to small, restricted areas, now, with modern transportation and communication, covers the entire earth. Marketing, at one time a single transaction, is now an intricate process, weaving its way through a maze of varied industry and business. Since the great majority of students enter some branch of industry, it is important that opportunity should be given in a course of this kind to gain a grasp of fundamental business principles.

The largest single group of subjects is taught by the Department of Economics and Marketing. These subjects give young men breadth of view in business affairs and train them in the execution of details for the purpose of preparing them for active management in the world of industry. The description of these courses on another page shows the scope and strength of the work.

There is a fine field of electives. In agriculture the student can take Commercial Grades of Grain, Livestock Judging, Cotton Grading, and Fruit Packing and Grading; in Business Training, Bookkeeping, Typewriting and Shorthand; in Science, Chem-

istry, Petroleum Technology, Investment and Insurance Mathematics. Spanish, German and French languages are offered. Trade is now international. Corporations are multiplying their foreign representatives, and the Government is extending its consular service. Other valuable subjects are history, journalism, public speaking and psychology. These electives assist the student in pointing his study in the direction of his special interests.

It is believed that this course gives an especial grasp of business knowledge and that the graduate who has initiative and is willing to work will always make a big place for himself in his chosen field of affairs.

Electives .....

## COURSES IN THE SCHOOL OF COMMERCE AND MARKETING

The following outline of study represents the required and elective work in the School of Commerce and Marketing. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

To graduate a student must earn 34 credits per year, or a total of 136, including credit given for military science and physical training. Students will not be allowed to register in less than 14 nor more than 20 credit hours. Sophomore electives are open to Juniors and Seniors where the necessary prerequisite work is taken.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis, hours of laboratory work.

# SUBJECTS

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER		
Hours. 3 (4)	Credit. 4 1-3 3 3 2 3 1-3 1 2-3	Hours.   2 (4)	Credit. 3 1-3 3 3 3 1-3	

# CODITOMODE VEAD

SOFHOMORE TEAR				
FIRST SEMESTER		SECOND SEMESTER		
Hours.   Hours.   Econ. 201, Elements of Economics   3   *Foreign Language   3   Bus. 301, Bookkeeping   6   (2)   (3)   (3)	3 3	Hours.  Marketing 3  *Foreign Language 3 Electives 10 Mil. Sci. (3)	3 3 10	
	JUNIOR	YEAR		
FIRST SEMESTER		SECOND SEMESTER		
Econ. 301, Business Organization 3 Econ. 303, Banking 3	Credit.	Econ. 302, Labor Economics	Credit.	
Econ. 305, Transporta-	3	Investments	3	

Electives .....

Econ. 306, Accounting & Auditing ...... 3

#### SENIOR VEAR

	DELTIZOR	A ALLEAN		
FIRST SEMESTER		SECOND SEMESTER		
	Credit.	Hours.	Credit.	
Econ. 413, Contracts & Laws of Business 2	2	Econ. 416, Salesman-	2	
Econ. 415. Domestic &	2	Econ. 418, Business Ad-	~	
Foreign Markets 2	2	ministration 2	2	
Econ. 421, Traffic Rates 1 Econ. 417, City Eco-	1	Bus. 402, Office Administration	1 2-3	
nomics 1	í	Econ. 412, Banking	1 2-3	
Econ. 419, Taxation 1	1	Management 1	1	
Electives9	9	Econ. 414, Rural Eco-	1	
		nomics 1 Econ. 410, Marketing &		
		Investigations 2	2	
		Electives6	6	

<sup>\*</sup>Spanish, German or French is accepted, but there must be two full years of the same language.

## Electives for Commerce and Marketing

Commerce and Marketing students may elect subjects offered by the following departments, subject to the approval of the dean of the School of Commerce and Marketing. Not more than twenty credit hours may be chosen from any one group:

## Group I .- Agriculture

Department of Animal Husbandry. Department of Dairy Husbandry.

Department of Poultry Husbandry.
Department of Agronomy.
Department of Horticulture.

Department of Farm Engineering.

# Group II .- Office Training.

Department of Business Training.

# Group III.-English, Public Speaking and Foreign Language.

Department of English.

Department of Foreign Languages.

Department of Public Speaking.

# Group IV .- Science.

Department of Chemistry. Department of Mathematics.

Department of Physics. Department of Biology.

# Group V.—Pedagogy, Sociology and History.

Department of History.
Department of Education and Social Science.

### DEPARTMENT OF ECONOMICS AND MARKETING

H. W. MOORHOUSE, Professor A. C. DOERING, Assistant Professor J. T. HORNER, Assistant

## SUBJECTS

## 103 Materials of Commerce. Class 2 hours. Credit 2.

The purpose of this course is two-fold: First, to give a working knowledge of business forms, instruments and methods; and second, to set forth a broad view of the elemental principles of business.

## 104 Geography of Commerce. Class 2 hours. Credit 2.

A groundwork in the geography of commerce and the uses of raw materials. These materials are traced through various stages to the finished product.

#### 201 Elements of Economics. Class 3 hours. Credit 3.

Introduction to the study of business, industrial and local problems, showing interrelation of all commercial activities.

Prerequisite for all economic subjects, except Economics 103 and 104.

#### 202 Elements of Marketing. Class 3 hours. Credit 3.

Every productive activity through which the product passes from first producer to consumer is analyzed. Special study is given to retailing, wholesaling, commission dealing, direct selling, mail order houses, the use of the parcel post, the activities of cooperative and consumers associations, etc.

# 301 Business Organization. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

Business is carried on mainly by corporations. The process of their organization, financing and management is shown. The modern "trust" is the subject of special study. Emphasis is placed upon the essentials of business administration. A view is given of the work of mercantile and manufacturers' associations, chambers of commerce, etc.

# 302 Labor Economics. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A study of labor conditions from the standpoint of manager and laborer. A view is given of methods of scientific management and the best treatment of large and small bodies of workmen for the purpose of obtaining the best results in profits and human welfare. Some time is given to the tracing of industry from its beginning to its present highly specialized processes, and special observations are made of industrial centers and causes contributing to their growth.

# 303 Banking. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

The relation of money and credit to every business activity is shown, and studies are made of the currency systems of the United States and foreign countries. The National and State laws now operative, as applied to commercial and rural banking, are analyzed. Some inquiries are made into questions of public finance. The various kinds of taxation are investigated.

305 Transportation. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

This course deals primarily with railroad economics, but some attention is given to water and highway transportation. The subject includes a history of railroad development in the United States, showing present problems and the relation of transportation to commerce. Railroad administration in foreign countries is investigated and study is made of governmental ownership.

## 306 Accounting and Auditing. Class 3 hours. Credit 3.

Prerequisite: Bus. 301.

Foundation work in the study of accounting and auditing. Both practice and theory are given. Financial statements, which include profit and loss accounts, cash receipts and disbursements, general and detailed balance sheets, are prepared and analyzed.

## 307 Principles of Economics. Class 2 hours. Credit 2.

A condensed presentation of Econ. 201 for those who do not wish advanced work in economics. Offered particularly for men in the Schools of Agriculture and Engineering.

## 308 Business for Women. Class 2 hours. Credit 2.

An explanation of the common instruments of business and of important economic principles. An examination of marketing problems with special reference to products bought for the home. A comparison of wholesale and retail, direct and indirect, cash and credit buying. Also a description of practical plans for household accounting.

# 310 Insurance and Investments. Class 2 hours. Credit 2.

Prerequisite: Econ. 201.

A study of life and property insurance and various kinds of insurance organizations. A view of the financial growth of insurance companies, showing their relation to the development of the country and their present financial influence. An investigation of bonds, stocks, mortgages, and all standard investments. Offered alternate years.

# 407 Cost Accounting. Class 4 hours. Credit 11/3.

Prerequisite: Bus. 301, Econ. 306.

The cost system is applied to various lines of production and illustrated by practical problems. Factory costs are examined. Raw materials are traced through to the finished products and all costs noted. Labor and overhead expenses are analyzed.

# 410 Marketing Investigation. Class 2 hours. Credit 2.

Prerequisite: Econ. 201, 202, 404.

One investigation may be determined upon by each student. This must be worked out in minute detail. These investigations cover practical ground and require intelligent initiative for research.

# 412 Banking Management. Class 1 hour. Credit 1.

Prerequisite: Econ. 201, 303, 306.

Problems in directing the work of a bank. The duties and responsibilities of president, cashier, teller and clerks are assumed in turn. Loans must be passed upon and questions of policy decided.

### 413 Contracts and Laws of Business. Class 2 hours. Credit 2.

Contracts are emphasized because no business transaction is possible without either a verbal or written contract. The methods of making, enforcing and terminating contracts, the statute of frauds, actions for damages, etc., are examined. Also a study of personal property, fixtures, agency, negotiable instruments, bailments, insurance, corporations, partnerships, etc.

#### 414 Rural Economics. Class 1 hour. Credit 1.

Prerequisite or concurrent: Econ. 201.

A study of farm business and rural life. A view of the relation of the farm home, social life, good roads, community cooperation, tenancy, soil conservation, standardization of crops, rural credits and better marketing to rural progress. A broad view of the possibilities of reorganizing agriculture and rural life. A thorough survey is made of rural conditions in foreign countries, United States and Oklahoma.

## 415 Domestic and Foreign Markets. Class 2 hours. Credit 2.

Prerequisite: Econ. 201 and 202.

A survey is made of the important money, cotton, grain, livestock and other markets in this and other countries. United States consular reports and statistical information bearing on exports and imports of various countries are analyzed. Inquiries are made into opportunities for international trade development.

#### 416 Salesmanship. Class 2 hours. Credit 2.

Prerequisite: Econ. 201 and 202.

A survey of the principles of salesmanship. Selling talks, sales letters and advertising copy are analyzed and practice in their preparation and application is given. Lessons are drawn from sales departments of large corporations. Goods, prices and market conditions are studied.

# 417 City Economics. Class 1 hour. Credit 1.

A view of municipal administrative problems. The franchise and the regulation and ownership of public utilities are subjects for special consideration.

#### 418 Business Administration. Class 2 hours. Credit 2.

Prerequisite: Econ. 101, 102, 201, 301, 303.

Actual practice in planning and executing business enterprises. Boards of directors' meetings are held, committee work assigned, etc. The grasp of each student of the enterprise as a whole and his ability to master details are thoroughly tested.

#### 419 Taxation. Class 1 hour. Credit 1.

A general consideration of questions of public finance. The general property tax, the income and inheritance taxes, and all methods of taxation in use in Oklahoma and the United States are studied.

## 421 Traffic Rates. Class 1 hour. Credit 1.

Prerequisite: Econ. 201, 401.

Traffic problems of railroads, particularly, are examined carefully. A close comparison is made of land and water rates between certain points, and of freight and express shipments. Questions of routing and adjustment of claims, etc., are reviewed. The reports of State railroad commissions and the Interstate Commerce Commission are analyzed.

### DEPARTMENT OF BUSINESS TRAINING

S. C. Bedinger, Professor A. C. Doering, Instructor Instructor

#### TWO-YEAR COURSE

The two-year course in business training is open to students who have completed the eighth grade or can pass a satisfactory entrance examination in common school subjects. Applicants must be at least eighteen years of age. Application for advanced standing should be made to the head of the department.

At the completion of the work, the student is given a certificate showing that he has completed the prescribed course in business training.

# Outline of Courses in the Department of Business Training, Giving Subjects and Hours

#### FIRST YEAR FIRST SEMESTER SECOND SEMESTER Hours, Credit. Hours, Credit. (10) (3) (5) (8) SECOND YEAR FIRST SEMESTER SECOND SEMESTER Bus. 52, Office Training 2 Bus. 54, Spelling & Penmanship. (3) Bus. 56, Typewriting (10) Bus. 58, Shorthand 4 Bus. 60, Dictation (8) Bus. 62, History of Commerce. 3 Eng. 122, Public Speaking (2) Hours. Credit. Bus. 63, Salesmanship 2 Bus. 59, Business Law 3 Bus. 61, Commercial Geography 3 Bus. 57, Shorthand 4 Bus. 53, Spelling & Penmanship 4 Bus. 57, Typewriting 5 Eng. 121, Public Speaking 5 (3) (8) (2)

# SUBJECTS

#### 1-2 Arithmetic. Class 3 hours. Credit 3.

The nonessentials are entirely omitted in this work. Those parts are given which contribute to business efficiency, such as: Aliquot parts, fractions, interest and discount, storage, percentage, profit and loss, partnership settlements, equation of accounts and partial payments.

# 3-4 Bookkeeping. Class 10 hours. Credit 31/3.

This course covers the different and various lines of industries. First, elementary work is given in the fundamental principles of debit and credit, followed by work in columnar books and statements of various kinds. There is special work in the closing of ledgers, the making of special business, trading, profit and loss and financial statements. In the more advanced work is included: Partnership and corporation accounting, special cost accounting, and work in the following particular lines: Banking, real estate, insurance, railroad station work, manufacturers' and jobbing and commission account-

ing. The thorough work in the above lines is supplemented with an auditing department where the functions of this subject are taught and its relation to the other departments shown.

301 Bookkeeping. Book work 10 hours. Credit 31/3.

The principles in this course are the same as in Business 3 and 4, but presented in condensed form.

# 5-6-53-54 Spelling.

All persons taking the Business Course must carry this subject. Thousands of positions are each year either not secured or lost on account of bad spelling. The value of spelling to the stenographer especially is obvious. The same is almost equally true with the book-keeper. The work in spelling is always written. Students are required to make a grade of 95% on examination in the subject before securing a diploma.

### Penmanship.

The business world demands that penmanship should be plain, rapid, easily written and easily read. Slow writing is out of date. The student is taught the arm or muscular movement method. At first considerable time is spent on movement drills in order to develop a good foundation; this is followed by intermediate drills, and finally the letters, according to principles and frequency of occurrence. A great deal of time is spent on sentence practice and letter writing. The development of a small, rapid, condensed handwriting is the end in view.

# 7-8-57-58 Shorthand. Class 4 hours. Credit 4 each.

This course covers thoroughly the Shorthand Manual and gives the student a thorough knowledge of the principles of the shorthand system, work signs, contraction and phrases, etc. This is followed by a large amount of dictation. The Gregg System is taught.

101-102 Shorthand. Class 4 hours. Credit 4 each.

Similar to Bus. 7 and 8.

- 9 Typewriting. Machine work 5 hours. Credit 13/3.
- 10 Typewriting. Machine work 8 hours. Credit 23.

Prerequisite: Bus. 9.

The touch system is employed. Mastery of the keyboard and a general knowledge of the mechanism of all standard machines. Requirements: First ten lessons in rational typewriting, or the equivalent, and a speed of twenty words per minute from copy matter. Speed drills and instruction in the care and adjustment of the typewriter. For stenographers, drills in transcription from shorthand notes and construction of letters. Nine hours per week. Requirements: Completion of all lessons in the manual up to Lesson 26, and a speed of thirty words per minute. Copy matter.

55 Typewriting. Machine work 8 hours. Credit 23/3. Prerequisite: Bus. 9 and 10.

56 Typewriting. Machine work 10 hours. Credit 31/3.

Prerequisite: Bus. 9, 10, 55.

Completion of the lessons in the manual. Drills in speed writing from manuscripts and rapid transcription from shorthand notes, including business letters and miscellaneous matter. Requirements:

A speed of forty words per minute from copy matter; from shorthand notes, new matter, transcribed at the rate of twenty words per minute. Rapid transcription from shorthand notes. Dictation direct to the machine. Legal forms, stencil cutting and care of the machine. Requirements: A speed of fifty words per minute from copy matter, with not over five errors; from shorthand notes, transcribed at the rate of thirty-five words per minute, from new matter. All papers to be graded by the International Typewriting Rules.

# 103, 104 Typewriting. Machine work 10 hours. Credit 31/3.

### 51 Business Correspondence. Class 3 hours. Credit 3.

A practical knowledge regarding the art of selling by mail is given in this subject. Selling personal services, selling merchandise, or anything else where the art of selling is involved, is carefully taught; in other words, successfully doing business by letter.

# 52 Office Training. Class 2 hours. Credit 2.

This course is to meet the great needs of the stenographer who goes to work in an office. After completing the shorthand manual and taking up dictation the student is then ready for this course. It is intended to put the finishing touches to the student's knowledge of shorthand and typewriting. Thorough instruction is given in business ethics, the mechanics of letterwriting, uses of business forms and papers, filing, bills, shipping, duplicating, constructing business letters, rough draft, and, in fact, any other work likely to come under the student's supervision in an office.

### 59 Business Law. Class 3 hours. Credit 3.

This subject takes up contracts, negotiable paper, partnership, sale of chattels, interest, usury, wills, conveyances of real estate, mortgages, etc.

# 60 Dictation. Practice 8 hours. Credit 23/3.

The work on the manual and that of dictation are by no means separate and distinct, since dictation begins early in the theory work, and theory continues through dictation. However, the second semester of the work is more largely dictation. Before advancing to office practice the student should develop sufficient ability to write new matter from dictation at an average speed of seventy-five words a minute for a period of half an hour. New matter at the rate of 100 words a minute for five minutes, transcribed accurately, is required for graduation.

# 61 Commercial Geography. Class 3 hours. Credit 3.

This comprises a study of the location of the sections that produce the different cereals, ores, fruits, vegetables, and, in fact, all commmodities that are produced or handled in this country, and the relation they sustain to the country and its commerce.

# 62 History of Commerce. Class 3 hours. Credit 3.

In this work the student is given information regarding the origin of commerce and its relation to civilization, its connection with the development of different countries.

# 63 Salesmanship.

The students of today have a great opportunity for real leadership in the smaller towns and cities, as well as the large centers of this country. To succeed to this leadership they must understand the psychology of salesmanship. 402 Office Administration. Class 1 hour, office work 2 hours. Credit  $1\frac{2}{3}$ .

Prerequisite: Bus. 101, 102.

In this course the principles underlying the organization and management of an office and the employes are carefully analyzed. The following subjects are examined: The office, equipment, heating, lighting and ventilation; office employes, their selection, training, experience and salary; office appliances; mechanical aid in office work; relation between manager and employes; human touch, efficiency; office records and systems; correspondence filing, card indexing, order systems, credits, collections, advertising, sales, and the purchase and handling of supplies.

# Typewriting Rates

15 hours a	week,	one	semester	\$3.00
10 hours a	week,	one	semester	\$2.00
5 hours a	week,	one	semester	\$1.00

Special students, or those taking typewriting where it is not a required subject in their course, will be charged \$2.50 a semester regardless of hours taken.

# THE SCHOOL OF VETERINARY MEDICINE

L. L. LEWIS, Dean

The growing importance of the livestock industry of the State has made a course in Veterinary Medicine a necessity. The work is so outlined as to provide a thorough and well balanced course of instruction leading to the degree of Doctor of Veterinary Medicine.

The entrance requirements to this course of study will require the presentation of fifteen units of high school work with a condition in one credit. See entrance credits in first of catalog for detail statement.

Candidates for the degree of Doctor of Veterinary Medicine must have attained the age of twenty-one years and satisfactorily completed all of the course as outlined.

There are many opportunities in professional and scientific work for young men of thorough training in veterinary medicine. In order to meet the demands that are made on those entering the field of private practice or positions requiring technical knowledge, the veterinarian must have a good general education in addition to the specialized work in veterinary medicine.

Some of the more prominent fields of work open to veterinarians are as follows:

Private Practice.—There are many good fields of work, not only in Oklahoma, but in other Southern States. The growing interest in the South is the livestock business. As the money invested in livestock increases so will the demand for competent veterinarians.

Civil Service.—Much important work in the United States Department of Agriculture is open only to men who are graduates from veterinary colleges.

State and City Work.—The position of State and Assistant State Veterinarians and municipal food inspectors are open as a rule only to qualified veterinarians. The army service also offers a field of work that is becoming attractive to qualified men.

# COURSES IN THE SCHOOL OF VETERINARY MEDICINE

The following outline of study represents the required work in the School of Veterinary Medicine. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject, and the even numbers as 102 represent the second semester's work. Freshman and higher class subjects are numbered as hundreds, 100 for Freshman work, 200 for Sophomore work, etc. The laboratory work is in parenthesis, and three hours of this work is equivalent to one theory hour or 1 credit. To graduate, a student must complete the following course as outlined. Registration will not be allowed in less than twelve nor more than twenty credit hours.

### FRESHMAN YEAR

	FRESHMA	AN YEAR	
FIRST SEMESTER	SECOND SEMESTER		
V. M. 101, Anatomy	Credit. 5 3 1-3 4 1-3 4 1-3	V. M. 102, Anatomy 3 (6) V. M. 104, Histology 3 (4) Chem. 102, Inorganic 2 (4) Zool. 402, Embryology 2 (4) Mil. Sci (3) Physical Education (3)	Credit 5 4 1-: 3 1-: 3 1-:
	SOPHOMO	RE YEAR	
FIRST SEMESTER		SECOND SEMESTER	
V. M. 201, Anatomy	Credit. 5 3 3 1-3 3 1-3	V. M. 202, Anatomy 3 (6) V. M. 204, Mat. Med. 3 V. M. 206, Pathology 2 (4) V. M. 208, Pharma- cology 1 (3) A. H. 102, Market Types (3) Mil. Sci (3)	Credit 5 3 3 1-2 2 3
	JUNIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
V. M. 301, Th. & Pr 4 V. M. 303, Clinical Diagnosis 2 V. M. 305, Surgery 2 V. M. 307, Surgical Anatomy (4) V. M. 309, Obstetrics 3 V. M. 311, Special Pathology 1 (4) V. M. 313, Clinic (6)	Credit. 4 2 2 1 1-3 3 2 1-3	V. M. 302, Th. & Pr	Credit. 4 4 1-3 3 3 2
	SENIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
V. M. 401, Th. & Pr	Credit.  4 3 4 1-3 2 2 2	V. M. 402, Th. & Pr 4 V. M. 404, Special Surgery	Credit. 2 2

V. M. 408, Laboratory Diagnosis V. M. 410, Meat Inspec-

(3)

(2)

1

2 2-3

#### DEPARTMENT OF VETERINARY MEDICINE

L. L. LEWIS, Professor W. P. SHULER, Assistant Professor E. A. BENBROOK, Instructor Assistant Assistant

The equipment used for instruction in Veterinary Medicine includes that of the laboratories of Bacteriology, Physiology, Chemistry, Zoology, etc. Such facilities will enable students to undertake their work with all conveniences and equipment afforded by well established courses of instruction.

### SUBJECTS

101 Anatomy. Class 2 hours, laboratory 6 hours. Credit 4.

Osteology and Myology of head and neck.
A comparative study of the skeletons of domestic animals and a dissection of the muscles of the head and neck of the horse. Instruction in anatomy extends over a period of two years and is given by lectures, recitations and laboratory work. Each student is required to make one or more complete dissections of the horse, with com-parative dissections of the trunk and viscera of other domesticated animals.

102 Anatomy. Class 3 hours, laboratory 6 hours. Credit 5.

Myology of the thoracic limb and trunk,

Prerequisite: Anat. 101.

103 Histology. Class 3 hours, laboratory 4 hours. Credit 31/3.

Histology is microscopic anatomy, and in the allotted time the student is required to collect, prepare and make drawings of all the different tissues of the body. This course is necessary in order that the later instruction in the various processes may be fully understood.

104 Histology. Class 3 hours, laboratory 4 hours. Credit 41/3.

A continuation of the work of the previous semester.

Text: Normal Histology, Piersol.

References: Ferguson, Davidhoff, Huber; Gould's Pocket Medical Dictionary.

201, Anatomy. Class 3 hours, laboratory 6 hours. Credit 5.

Myology of pelvic limb and splanchnology.

Prerequisite: Anat. 101, 102. In addition to the dissections of the muscles and ligaments of the pelvis and hind limb, dissections of the organs and viscera of the trunk will be commenced and continued through the next semester.

202 Anatomy. Class 3 hours, laboratory 6 hours. Credit 5.

Angiology and Neurology.

Prerequisite: Anat. 101, 102, 201.

The work of this semester will be a continuation of the dissections of the viscera and will include a special study of the circulatory and nervous systems of the horse. Surgical regions are especially emphasized.

Text: Comparative Anatomy of the Domestic Animals, Sisson,

### 203-204 Materia Medica. Class 3 hours. Credit 3.

Prerequisite: Freshman Chem. 101 and 102.

Materia medica is a subject that deals with the origin, derivation, physical and chemical properties and tests of purity of medical materials. The subject is taught throughout the second year, the first half being inorganic and the second half organic.

Text: Materia Medica and Therapeutics, Winslow.

# 205-206 General Pathology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Vet. Med. 103 and 104.

A study of the effects of disease processes upon the body tissues and fluids without special reference to any particular disease. In the laboratory these processes are studied and drawn with the aid of the microscope and projectoscope. The students are instructed in laboratory technique.

# 207 Comparative Physiology. Class 3 hours. Credit 3.

By aid of lectures, demonstrations and tests the comparative physiology of the domesticated animals is presented in a thorough and practical manner.

Text: Veterinary Physiology, Smith.

# 208 Pharmacology. Class 1 hour, laboratory 3 hours. Credit 2.

A lecture and laboratory course given to the second year class during the second semester, embracing a study of the theory of pharmaceutical methods and operations, and the compounding of various preparations with special reference to prescription work.

No text.

# 301 Theory and Practice. Class 4 hours. Credit 4.

Theory and practice includes a study of the diseases of domesticated animals, their diagnosis and treatment as met in routine practice. This subject is taught for two years. In that length of time it is intended by means of lectures and clinics to acquaint the student with as great a variety of abnormal conditions as possible and instruct him in their diagnosis and treatment.

# 302 Theory and Practice. Class 4 hours. Credit 4.

Prerequisite: Vet. Med. 301.

# 303 Clinical Diagnosis. Class 2 hours. Credit 2.

In presenting this subject, it is the intention of the instructor to condense, review and emphasize the methods used in diagnosing disease.

# 305 Surgery. Class 2 hours. Credit 2.

Prerequisite: First and second year Anatomy.

The theory of veterinary surgery is given the third and fourth year students in connection with the Theory and Practice of Medicine and the Hospital Clinic.

Methods of restraint, the use of different anesthetics, and the general principles of surgical technique are taught the first semester of the Junior year. The different surgical diseases are then studied and discussed.

The clinic offers practical demonstrations of the principles dis-

cussed in class.

306 Surgery. Class 3 hours. Credit 3.

307 Surgical Anatomy. Laboratory 4 hours. Credit 11/3.

Prerequisite: Anat. 101, 102, 201, 202.

A review of the previous course, with special reference to the general topography and various special surgical areas of the horse, ox, dog and pig.

Text: Comparative Anatomy, Sisson.

Reference: Surgical Anatomy, Share, Jones.

309 Obstetrics. Class 3 hours. Credit 3.

After a brief review of obstetrical anatomy the work is devoted largely to a consideration of the different abnormal conditions arising incident to parturition and the treatment.

Text: Veterinary Obstetrics, Williams.

311 Special Pathology. Class 1 hour, laboratory 4 hours. Credit 21/3. Prerequisite: Vet. Med. 205 and 206.

This work includes a study of disease processes in the different organs of the body and contagious diseases. An introduction to postmortem technique and, when autopsies are available, the student will be taught to apply his knowledge in a practical way.

Text:

Reference:

313 Clinic. Laboratory 6 hours. Credit 2.

314 Clinic. Laboratory 6 hours. Credit 2.

401 Theory and Practice. Class 4 hours. Credit 4. Prerequisite: Vet. Med. 301 and 302.

402 Theory and Practice. Class 4 hours.

Prerequisite: Vet. Med. 301, 302 and 311.

401 and 402 deal with the different phases of infectious diseases, their diagnosis, control and eradication. Textbooks for all courses are the same.

Text: Pathology and Therapeutics of the Diseases of Domesticated Animals, Huytrea and Marek.

References: Law, Hoare, Friedeberger and Frohner.

403 Surgery. Class 3 hours. Credit 3.

404 Surgery. Class 2 hours. Credit 2.

Text: Veterinary Surgery, Merilatt, Vols. I, II, III, IV.

References: Share, Jones, Cadiot and Adams.

No school of medicine is stronger than its clinic. Here the student comes in actual contact with the problems relating to the care of sick animals. Hospital accommodations are furnished, and squads of students are assigned patients as they are presented. This work tends strongly to impress upon the student the practical phase of his previous training.

405 Dentistry. Class 1 hour, laboratory 3 hours. Credit 2.

A study of the teeth of the domestic animals by aid of bones and models, and a consideration of the cause of their defects, prevention and treatment of same.

# 406 Milk and Dairy Inspection. Class 1 hour, laboratory 3 hours. Credit 2.

In this course, class work includes a study of the secretion of milk, its chemical properties and bacteriology; transmission of diseases of man by milk; methods of handling milk from the cow to consumer, and methods of herd and dairy farm inspection. The laboratory work includes the more important physical and chemical, bacteriological and microscopic milk tests.

Text:

Reference:

# 407 Parasitology. Class 2 hours. Credit 2.

A study of internal and external parasites of the domestic animals is taken up and their methods of control and eradication discussed.

Text: Parasitology, Kaupp.

# 408 Laboratory Diagnosis. Laboratory 3 hours. Credit 1.

This course will include practice in the ordinary diagnostic methods with which the veterinarian should be familiar. Special attention will be given to the diagnosis of parasitic troubles and bacterial infections. Some work in urine and milk analyses will be given.

409 Clinic. Laboratory 6 hours. Credit 3.

# 410 Meat Inspection. Class 3 hours. Credit 3.

Meat inspection takes up a review of postmortem symptoms of different diseases of food producing animals, especially those transmissible to man. The subject is of especial importance to students who contemplate entering the Government work of inspecting meat products after graduation. Side trips are taken to the packing houses where the work of inspecting meat products is in operation.

Text: Meat Hygiene, Mohler and Eichorn.

# 412 Lameness and Shoeing. Class 2 hours, laboratory 2 hours. Credit 23/3.

Diseases of the foot and the effect of shoeing on their prevention and treatment. The instruction is of especial importance to the city practitioner.

Text: Horsehoeing, Adams; Diseases of the Foot, Reeks.

# 414 Clinic. Laboratory 6 hours. Credit 3.

The following subjects are given to students of agriculture in order that they may become familiar with some of the more common diseases that every stock owner must treat:

# 210 Veterinary Science. Class 2 hours, laboratory 2 hours. Credit 2%.

A study of some of the practical points of the anatomy of the domesticated animals.

Text:

# 315 Physiology. Class 3 hours. Credit 3.

A fundamental course in the physiology of domesticated animals, with especial emphasis on nutrition and locomotion.

Text: Veterinary Physiology, Smith.

# 310 Animal Diseases. Class 2 hours, laboratory 2 hours. Credit 23/3.

The more common diseases of livestock are discussed in this course. The laboratory work is intended to teach the student simple operations and familiarize him with practical means of restraining animals for operative purposes. Hygiene and the disposal of animals dead of infectious diseases is brought out and special emphasis is placed on the administration of vaccines, uses of antiseptics, etc.

# THE SECONDARY SCHOOL

S. A. MARONEY, Professor and Principal
J. H. CALDWELL, Assistant Professor
J. O. MUNCIE, Instructor
CAROLYN ISABEL BABB, Assistant
HELEN LUCRETIA MOODY, Assistant
FRED McCARRELL, Assistant
J. W. BRIDGES, Assistant
(College Departments)

This course contains the standard requirements for college entrance. It provides the foundational work, and at the same time allows the student to choose a number of practical branches according to tastes and purposes.

The requirements for a first grade two-year State certificate are met by including the prescribed one year in education, domestic science and agriculture.

While other work is being carried, two lessons per week in piano, voice, violin or wind instruments may be taken, for which a nominal charge is made for use of instrument. Students in the department have full privileges as to College library, Dormitories, laboratories, shops and many College activities as well as the free services of the official College physician. No tuition is charged for any courses. Male cadets must take military training. Physical education is required of both boys and girls. Credit of one-half of hours is allowed for military and physical training. Military training may be dropped when total hours for College is furnished or continued voluntarily.

Recitation periods are fifty minutes long. Penmanship and spelling must be taken if student is not proficient. Credit examinations are given in all branches. Grades brought from approved high schools are accepted. The course is so administered that it can be completed in from three to four years, according to amount of extra work which stronger and mature students are permitted to carry. The time required to complete it may also be shortened by grades accepted from high schools, by passing credit examinations, and by attendance during Summer Sessions.

Entrance to the Secondary School requires: First, that applicant be 16 years of age, if residing where a four-year high school is maintained, or 14 years of age if no such high school is maintained at his home. Second, that a diploma of graduation, or certificate of promotion from the common schools of the State be presented or that applicant pass examination in reading, spelling, penmanship, geography, United States history, grammar and arithmetic, as prescribed by law. Maturity and capacity of the student to do the work are given due weight.

# CURRICULUM OF SECONDARY SCHOOL

FIRST YEAR

FIRST SEMESTER	ъ.	SECOND SEMESTER	_
Cl. English 11 5	Pr.	Cl. English 12 5	Pr.
Algebra 11 5 Physiology 11 3 Freehand Draw, 11		Algebra 12 5 Arithmetic 12 5 Woodwork 12 5	
Physiology 11	(2) (4)	Woodwork 12	(4)
Woodwork 11	(4)	and	(4)
Woodwork 11  Mechanical Drawing 11  Physical Education 11  Military (Boys)  Spelling 11  Penmanship 11	(2) (3)	Mechanical Drawing 12	(2)
Military (Boys)	(3)	Freehand Drawing 14	(2)
Spelling 11	(2)	or	
Ethics 11	(2) (1)	D. A. (Basketry) 12	(4)
		Freehand Drawing 12 Physical Education 12	(4)
	3	Military (Roys)	(3) (3)
		Military (Boys) Spelling 12 Penmanship 12	(2)
	1	Penmanship 12 Ethics 12	(2) (1)
	COND		(1)
FIRST SEMESTER	COND	SECOND SEMESTER	
C1.	Pr.	CI	Pr.
English 21		English 22 4 Plane Geometry 22 5 Modern History 22 5	
Ancient History 21		Modern History 22	
Woodwork 21		Woodwork 22	
Farm Structures 21	(4)	Forge 22 (Boys)	(4)
Of	` '	0.5	
D A. 21 Sewing (Girls)	(4) (2)	D A. 22 Sewing (Girls) Vocal Music 22 (Teachers) Physical Education 22 Military (Boys)	(4)
Physical Education 21	(3)	Physical Education 22	(2) (3)
	(3)	Military (Boys)	(3)
	HIRD	YEAR	
FIRST SEMESTER Cl.	Pr.	SECOND SEMESTER	n
English 31		English 32 Cl. Physics 32 3 American Government 32 4	Pr.
Physics 31	(4)	Physics 32	(4)
Agriculture 31	(4)	Agriculture 32 4	(4)
01		Or	(
Lat., Ger., Fr., Span. 31		Lat., Ger., Fr., Span. 32 4 Solid Geometry 32 4	
or	(4)		
D. S. 31 (Foods) 1 Physical Education 31	(3)	Algebra 34 (Engineers)	(4)
Military (Boys)	(3)	D. S. 32 (Foods) 1 Algebra 34 (Engineers) 4 Physical Education 32 Military (Boys)	(3)
70		(20)0)	(3)
	OKIH	YEAR	
FIRST SEMESTER Cl.	Pr.	SECOND SEMESTER - Cl.	Pr.
Lat., Ger., Fr., Span. 101 4		Lat., Ger., Fr., Span. 102	11.
Education 101 2		Education 1022	
and Education 201		and	
Education 201	(1)	Education 202 2 Botany 42 (Exc. Engineers) 3	(4)
		Geography 423	(4)
ELECTIVES TO MAKE 15 UNITS Cl.	Pr.	ELECTIVES TO MAKE 15 UNITS	
Language 31, 101 4	11.	Languages 32, 102	Pr.
Arithmetic 41		Languages 32, 102 4 Woodwork 22 Baskery 12	(4)
Farm Structures 21	(4)	Solid Geometry 32	(4)
D. A. 41	(4)	Solid Geometry 32 4 Forge 22	(4)
Woodwork 21	(4)	Shorthand etc	. ,
Shorthand, etc Vocal Music 41 (Teachers) Physical Education 41	(0)	Typewriting Shorthand, etc. Vocal Music 42 (Teachers) Physical Education 42 Military (Boys)	(2)
Physical Education 41	(2)	Physical Education 42 Military (Boys)	(3)
Military (Boys)	(3)	(Doys)	(3)

# **SUBJECTS**

# English 11, 12. Class 5 hours.

First year book for composition theory and grammar. Writing two themes a week for individual correction and revision. Two to three classics each semester. Spelling and penmanship must be taken separately if lacking.

# English 21, 22. Class 4 hours.

Composition, theory and practice. Three or more classics each semester. Oral interpretations.

# English 31, 32. Class 4 hours.

Eng. 31 comprises classics and composition; Eng. 32 is good course in English grammar. Some classics and composition.

# Algebra 11, 12. Class 5 hours.

The solution of practical problems included in the aim. Pure algebra as foundation mastered thoroughly. Graphic method in equations stressed. Through quadratics and review.

Text: First Principles of Algebra, Revised, Slaught and Lennes.

# Algebra 31. Class 3 hours.

Requires Algebra 11, 12.

Text: Same as for 11 and 12.

Alternate with D. S. 31 (Foods).

### Algebra 34. Class 4 hours.

Continuation of Algebra 31. Required of engineers only. May be elective for fourth year.

# Physiology 11. Class 3 hours, laboratory 2 hours.

After physiology in common school. Taught by Science Department of College, with equipment of charts, models and apparatus. One aim is training in laboratory methods and note taking and scientific attitude. Lays foundation for later work in science. Gives grade on teacher's certificate.

Text: Advanced Physiology, Conn and Buddington.

#### Arithmetic 12. Class 5 hours.

Common operations. Principles rather than short-cut calculations. The student's language and mental method looked after. Use made of equation.

Required of all students.

Text: Complete Arithmetic, Wentworth and Smith.

# Freehand Drawing.

Courses 11 and 12 are 4 hours each. Course 14 is 2 hours, and grouped with Woodwork 12 and Mechanical Drawing 12.

# Woodwork, or Manual Training. Shop 4 hours.

Course 11 required of boys and girls. Girls may take D. A. (basketry) 12 instead of Woodwork 12. Mechanical Drawing 2 hours, required with Woodwork 12. Course 21 is mostly turning; 22 is cabinetmaking. When personal proficiency is acquired, many useful articles for the home are made. Courses 11, 12, 21, 22 fulfill the manual training requirements for teacher's certificate course of two years.

See Manual Training course, College.

Mechanical Drawing 11, 12. Class 2 hours each.

Reinforcement of courses in woodwork taken at the same time. Closely correlated with it and taught by Manual Training Department.

Domestic Art 12 (Basketry). Class 4 hours.

Basketry, cord, rafia and reed work. Arthicles made are adapted for teaching handwork in the grades.

Domestic Arts 21 (Sewing). Class 4 hours.

Plain stitches applied to various articles as towels, sewing aprons, etc. Patching and darning. Machine sewing. Seams. Simple undergarments. Study of textiles and fibers used.

# Plane Geometry 21, 22. Class 5 hours.

After Algebra 12.

Text: Plane Geometry, Stone and Millis. Parts I and II for courses 21 and 22, respectively.

Ancient History 21. Class 5 hours.

First half of a year's survey of whole field of history. Oriental, Egyptian, Grecian, Roman and Medieval Europe to 1789. Making of historical maps and notebooks required.

Text: Outlines of European History, Part I, Robinson and Breasted.

Modern History. Class 5 hours.

Continuation of 21. From beginning of French Revolution to date. Completes a year of general history which is accepted on a teacher's certificate. Maps and notes.

Text: Outlines of European History, Part II, Robinson and Beard.

Farm Structures and Equipment. Practicum 4 hours.

Course considers briefly the suitable machines, structures and materials adapted to the various types of farming. Farm water supply. Sanitation. Labor-saving devices. Fencing. Drawing of plans for farm buildings.

Forge 22. Shop 4 hours.

First work in blacksmithing. Iron and steel. Drawing, upsetting, welding and tempering.

Vocal Music. 2 hours.

Courses 21, 22, 31, 32, the series covering two years. Essential work for teachers.

Physics 31 (Elementary). Class 3 hours, laboratory 4 hours.

Required in all courses.

Prerequisite: Alg. 11, 12, Plane Geom. 21, 22.

Covers in an elementary way the principles of mechanics and heat.

Text: Essentials of Physics, Hoodly.

Physics 32 (Elementary). Class 3 hours, laboratory 4 hours.

Required in all courses.

Prerequisite: Phy. 31.

A continuation of course 31. A study of magnetism, electricity, sound and light.

# Oklahoma History and Civics 41. Class 1 hour, laboratory 1 hour.

The unique story of Indian consolidation and settlement of Indian Territory and Oklahoma. One hour devoted to current State affairs. Surveys of State in education, industry and government. Many maps and supplementary matter used.

Required for State life certificate.

# American History 31. Class 4 hours.

High school history. Gives grade on teacher's certificate.

#### American Government 32. Class 4 hours.

Prepares to teach in common schools. Pedagogy of subject given. Course composed of two parts, how the government operates and how it is organized.

### German 31, 32.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Written and oral translations from English to German. Conversation.

Text: German Grammar, Paul V. Bacon; German Life, Philip S. Allen,

#### Latin 21, 32.

Drill on the essentials of Latin grammar, acquiring of vocabulary, reading stories from Roman history, anecdotes and fables.

Text: Latin Lessons, Smith.

# French 31, 32.

Essentials of French grammar, with the more common irregular verbs. Reading of about one hundred pages of easy prose. Careful training in pronunciation.

Text: Nouveau Cours Francais, Fontaine; Contes et Legendes, Guerber; Franch Reader, Aldrich and Foster.

# Spanish 31, 32.

A practical and thorough course conforming to the most advanced methods of teaching; careful treatment of pronunciation. The student realizes that he is learning a living language.

Text: A Spanish Grammar, Coester; Elementary Spanish Reader, Harrison.

(For courses 101 and 102 in second year of language, see College.)

# Botany 22. Class 3 hours, laboratory 4 hours.

Elementary. A study of plant forms, mainly the higher, together with the more important plant activities. Living material is used as much as possible in order that the student may gain first hand information. Latter part of semester devoted to cells and cellular structures. One or more types from each large plant group.

Text: Bergen and Davis.

Physical Education (Men). Class 3 hours. 3 year's credit given and

required.

Course 11. Free exercises, games, athletic dancing and mass class drills. A portion of each class period is devoted to talks on exercises, diet, rest, work, and the importance of correct hygienic habits.

Course 12. Elementary apparatus, work on buck and mats, out-of-door basketball, and track and field work. Hygienic talks.

Course 21. Mass drills with and without hand apparatus. Elementary work on horse and parallels. Rhythmic exercises and mat work. Hygienic talks.

Course 22. Mass drills with hand apparatus; more advanced work

on horse and parallels; games, track and field work. Hygienic talks.

Course 31. Mass drills. Elementary work on horizontal bar and flying rings, with systematic graded work on the horse and parallels. Hygienic talks.

Mass drills. Intermediate graded exercises on all Course 32. apparatus. Tumbling. Athletic dances and games. Track and field

work. Introductory lectures on physical education,

Physical Education (Women). Class 3 hours.

Courses 11, 12, 21, 22, 31, 32 required.

Calisthenics and gymnastics. Aims to give thorough work in graded gymnastics by means of free exercises with and without hand apparatus. Elementary folk play. Games and marching. Handled by College Department of Physical Education for Women.

Three times a week. Counts one-half of hours for College entrance. Military science instruction given and cadet drill. Cadets in the band do not drill.

Geography 42. Class 3 hours.

High school geography. Answers purposes of teachers for common schools.

Domestic Science 31, 32 (Foods). Class 1 hour, laboratory 4 hours.

A popular, practical course in cooking and its materials to meet the needs of public school teachers, housewives and students in any course who desire to take it. Does not require chemistry as a prerequisite. Grade applies on teacher's certificate.

31, 32 Agriculture (Crop Production). Class 2 hours, laboratory 4 hours.

A general course which deals with the fundamental principles underlying the production of crops. Special attention is given those crops of most importance in the State. Selection of seed, seed testing and grading, cultural methods, and the general management of the crops are taken up. Rotations, green manures and commercial fertilizers, together with their relation to the maintenance of soil fertility are discussed. The most important insect enemies and dis-eases of the common crops and methods of their control are considered.

Required for teachers' certificates.

101 Psychology.

201 History of Education.

102 Principles of Education.

202 Methods and Management.

These constitute the required one year in pedagogy for two-year State certificate. For description, see School of Education in College.

# OTHER DEPARTMENTS

### DEPARTMENT OF MUSIC

### Courses in Music

		Th.	Pr.	Cr.
1	Piano	1		1
2	Voice	î		î
3	Violin	î		î
4	Wind or Band Instruments	ī		î
	Public School Music	2		2
	Music Theory or Harmony	_	2	2-3
	Choral Practice		2	2-3
	Band or Orchestra, Junior or Senior		2	2-3
	should register by numbers			

Music makes broad claims upon the attention of students because of its generally recognized educational value, its cultural influence on the home life of the people, and its professional claims upon the more talented students of music. The instruction in this department tends toward the musical education and training of a large portion of the student body, and free instruction is offered all regular students who desire to select music, provided satisfactory progress is made from month to month in the subject.

Accomplished musicians are always in demand as directors, singers, teachers, accompanists and organists for church, concert and public school music work. The Music Department offers earnest students the opportunity to acquire scholarly musicianship.

As a matter of College policy, students will not be allowed to undertake music to the exclusion of other subjects, since it is the purpose of the College to distribute these studies to the greatest possible number of students attending this institution, without offering university or conservatory courses therein. Students may take only one course in music during any term, unless additional privileges are granted by the Faculty.

The following courses enable the student to obtain a comprehensive and practical knowledge of music and to acquire skill and power in interpretation. The time required for completing a

course will depend upon previous preparation, the talent, ability and character of the work of each student, but all have the privilege of advancing as rapidly as is consistent with good work.

#### COURSES IN VOICE CULTURE

### Elementary. Two lessons per week.

Exercises are given for deep breathing and breath control; for purity of production, freedom of action and blending of the registers, correct attack and resonance, pure vowel production and distinct articulation.

### Intermediate. Two lessons per week.

This course gives great attention to tone placing, elements of style and phrasing, stacatto, legato and portamento delivery, and exercises tending to the greater flexibility of the voice. Songs of medium grade freely used.

### Advanced. Two lessons per week.

This course is devoted to a study of tone color, agility, and all musical ornaments—trill, turn and gruppetta, appogiatura, acciaccatura, mordente—mezza-di-voce, phrasing and style, and advanced teaching by means of difficult exercises and songs, recitatives and arias from opera and oratorio.

All students in the elementary voice class are urged to attend the sight-reading class unless excused by the Director. Attendance at all recitals is required of every student. When requested, students in any grade must sing in recital and from memory.

#### COURSE IN PUBLIC SCHOOL MUSIC METHODS

Credit for work in this subject at some college or State Normal School will be freely given, but such credit should be claimed before entering the Senior year.

This course is carefully classified for each of the grades in the public schools, the work being outlined to develop the vocal ability and musical education of the pupils to suit the particular condition of the mind and the voice of the child at the average age in each grade. This outline is somewhat as follows:

Rote songs for little folks. Study of "staff", "notes", "scale". Location of "do", or the keynote, in nine different keys. Sight reading and singing, by syllable and by letter. Much attention given to tone quality and rhythm. Complete analysis of songs—as to key signature, meter signature, tempo signs, marks of expression, the different values of notes used, etc. Written work from oral dictation of tones, syllables or letters. Written work from dictation of rhythm, Transposition of songs into different keys. Special practice in music class conducting. Singing at sight, rounds, and two, three and fourpart songs. Thorough practice writing and singing major, minor and chromatic scales. "Spelling" and "pronouncing" different triads or chords. A little study of the elements of harmony.

#### PIANO COURSE

### Elementary-Piano. Two lessons per week.

Exercises for position and development of finger, hand and arm muscles. Scales; arpeggios; preparatory technique, Phillips' Preparatory Exercises; Aloys Schmitt, etc. Studies for technique, expression and phrasing from Burgmuller, Op. 100; Concone, Op. 24; and others. Pieces and easy sonatinas.

# Intermediate-Piano. Two lessons per week.

Scales; arpeggios; finger training; Carl Stansny, Thirty Exercises Op. 80; Williams and other suitable technical studies. Octave studies by Wilson G. Smith, Lon Williams or others. Selections from Czerney, Op. 299 and 740; Heller Studies, Op. 47. 46, 45; Bach, two-part inventions; Mendelssohn's Songs Without Words; easy sonatas by Haydn, Mozart and Beethoven. Pieces by Spindler, Grieg, Godard, Schumann, Chaminade, Lock, MacDowell, Nevin, etc.

# Advanced-Piano. Two lessons per week.

A systematic study of the scales and arpeggios in all forms; suitable technical exercises, Czerny, Op. 740; Cramer-Bulow Studies, etc; octave studies by Kullak, Phillip or others; Bach Three-part Inventions and Well Tempered Clavichord; Beethoven sonatas; Chopin preludes, etudes, nocturnes and waltzes; pieces by Schubert, Schumann, Moskowsky, Tschikowsky, Poldini, MacDowell and other composers.

#### THEORY

The course comprises the study of the following: Musical rhythm, tempo marks, accents, abbreviations and signs, natural and artificial groupings, musical embellishments, scales, intervals, chords and cadences.

#### HARMONY

Classes in harmony will be offered to students having a year's credit in theory.

### VIOLIN COURSE

# Elementary.

Careful attention given to proper position of holding the violin and bow. Elementary violin lessons from modern methods. Scales and chords from first to third positions. Studies by Wohlfahrt, Tours, Sevcik, Brun and Scholz, Kayser, etc. Pieces and ensemble. Intermediate.

Major and minor scales in all positions. Studies by Mazas, Alard, Sevcik and Kreutzer. Pieces by Leonard, Weiniawski, Vieuxtemps, etc. Sonatas by Corelli, Tartini, Handel, Mozart and Beethoven. Easy concertos by modern composers. Sight playing, orchestra, string quartet.

#### Advanced.

Technique by Sevcik, studies by Kreutzer, Fiorillo, Rode. Concertos by Viotti, Rode, Kreutzer, Burch, Saint-Saens, etc. Orchestra, ensemble, string quartet, class.

### Viola, Violoncello and Contrabass Course.

These instruments may be studied by similar grades to those in the violin course, or may be carried only up into the Intermediate Grade. Pupils having reached a fair degree of proficiency on any stringed instruments are required to play in the regular College orchestra.

#### COURSE IN WIND INSTRUMENTS

Students wishing to take lessons on any wind instrument receive two lessons per week on instruments.

#### Methods Used.

For Clarinets.—Lazarus, H; Kroepsch, F.; and Baermann's.

For Oboe.—Rosenthal, R, Practical Method.

For Bassoon.—Satzenhofer, J. A., Practical Method.

For Saxophone.—The Universal Method. For Cornet, Horn and Baritone, Treble Clef.—Arban's Method. For Baritone (euphonium), three or four or five valves in Bass Clef.—Universal Method.

For Trombone.—Bonnisseau's Complete Method.

For Bass.—Pares, G., Daily Tecknical Exercises. Complete course of scale studies, and Pandert, E., Etudes.

#### The Band.

Instruction will be given by regular College band leader in the use of brass and wood-wind instruments. To become a member of the College band the student must pass a satisfactory examination before the Director as to knowledge of music and ability to perform on certain instruments before securing recommendation to the President for transfer to the band. The members are required to attend practice three times per week and to perform in public by authority of the President. There is no charge for instruction in the band. The College furnishes most of the instruments, music and music stands to members of band and orchestra. Other students pay \$1.00 per month in advance for instruments used in practice when furnished by the College.

#### The Orchestra.

Any College student who plays on any string or wind instrument has the privilege of the orchestra on approval by the Director of Music.

### DEPARTMENT OF PHYSICAL TRAINING FOR MEN

Much of the success of a young man or woman in college and in life after graduation depends on good health. The Oklahoma A. and M. College believes in the old adage, "A sound mind in a sound body". The Department of Physical Training aims to create and maintain a vigorous state of health in every student in the College, and its work is so diversified that it meets the individual needs. It strives to keep the student body in the best possible physical condition, for and during their college course, and to lay the foundation for proper living and care of the body.

The Men's Gymnasium is a large, well-lighted room 40x60 feet and contains all of the necessary apparatus for gymnasium work of all kinds. The outfitting is done with the idea of giving the student advantages to be found in any well regulated college gymnasium. Dumbbells, barbells and Indian clubs will be found there for mass class drills, and of the heavier apparatus there are the flying rings and traveling rings, the horse, the horizontal bar, the parallel bars, mats, jumping standards, etc. Boxing gloves and fencing foils are also supplied to those desiring to enter into this special work.

In direct connection with the gymnasium is a large locker room with 600 steel and wooden lockers, benches, and a well equipped shower room with eight showers for hot and cold baths.

Every student in the College is expected to do some work to keep himself in the best possible physical condition.

Students of the Secondary School and Freshman classes, Business and Short Courses are required to do a certain amount of work, for which they receive credit necessary for graduation. There are also classes organized for the other students of the College.

An athletic field for football, baseball and track and field athletics is provided by the College and maintained by the Athletic Association. Students are encouraged to take part in athletic and out-of-door sports. College and class teams are organized

and maintained by the Athletic Association, and each team is under the supervision of a trained instructor.

Athletics are a part of the physical training work, but whether a student participates in them or not is optional. No student is allowed to become a member of a team until he has been examined by the Director and proven that he is physically fit. A high standard of scholarship is also required of all members of the College teams.

Each student in the Men's Department must provide himself with a gymnasium suit so that there can be a complete change of clothing after the physical training work. This suit consists of a black sleeveless jersey, black running trousers and soft-soled shoes. These can be procured at a local store at a cost of not to exceed \$2.00.

# SUBJECTS

#### COURSES FOR MEN

# Physical Examination-Preliminary

A thorough physical examination is required of all entering students. This examination consists of measurements, strength tests, examination of the eyes, ears, nose, throat, lungs, heart and other vital organs, and special stress is laid upon physical deformities and inequalities. These defects are pointed out to the student and exercises to correct them are prescribed. Where necessary, special attention and advice are given to the student. An examination is taken at the beginning and at the end of the first year, and at the end of each year after that.

A gymnasium handbook containing chapters on personal hygiene, diet, exercise, prescription, injuries and an anthropometric table is given to each student, who is required to plot his measurements and, upon completion of the gymnasium course, the book becomes his property.

#### FRESHMEN

### 101 Physical Education (first semester).

Required of the Freshmen of the College. The work of the Freshman class in this course consists of games, athletic dancing, boxing, wrestling and mass drills, with and without hand apparatus. Graded, systematic work on all apparatus, tumbling and indoor track work. Part of the work will consist of lectures on physical educational subjects. Three times a week. Credit given. Required for graduation.

# 102 Physical Education (second semester).

Required of the Freshmen of the College. Advanced work on apparatus, tumbling, athletic dancing, games and drills. The latter portion of the semester will be devoted exclusively to work out of

doors, with emphasis on track and field athletics. Lectures on physical educational subjects. Three times a week. Credit given. Required for graduation.

The following courses in theory may be offered for college credit that the science of physical education may be better understood, that systematic training for athletic events may receive more encouragement, and that men who are expecting to teach in high schools and academies may have the opportunity of fitting themselves to supervise or teach physical training.

### 103 Physical Education (first semester).

Freshman elective.

Anatomy (large muscle groups), personal hygiene, systems of training, Swedish theory and nomenclature. Once a week. Attendance at regular gymnasium classes compulsory.

# 104 Physical Education (second semester).

Freshman elective.

Continuation of Course 103 during second semester, with special assignments in track and field work. Attendance at regular gymnasium classes compulsory.

# 201 Physical Education (first semester).

Sophomore elective.

Anatomy and kinesiology, anthropometry, first aid, applied hydrotherapy and massage. Special lectures. Once a week, with assignments in gymnasium and field.

# 202 Physical Education (second semester).

Sophomore elective.

Continuation of Course 201 during second semester, with special assignment in track and field work.

# 301 Physical Education (first semester).

Junior elective.

History of physical education, physiology of exercise, physical diagnosis (methods of examination for bodily defects). Organization, construction and equipment. Once a week with assignments in gymnasium and field.

# 302 Physical Education (second semester).

Junior elective.

Continuation of Course 301 during second semester, with special assignments in track work.

# 401 Physical Education (first semester).

Senior elective.

Anatomy (musculature), medical gymnastics, prescription of exercises, paidology, administration and management, public school and playground methods. Assignments in gymnasium and field. Three times a week,

# 402 Physical Education (second semester).

Senior elective.

Continuation of Course 401 during second semester, with special assignments.

NOTE.—Courses 103 to 402, inclusive, may be elected only with the consent of the Director of Physical Education and by vote of the Faculty.

### 403 Physical Education (first semester).

Senior and Junior elective.

A course in the theory of coaching the four major sports of college athletics. This work includes football and basketball.

Two hours each week.

### 404 Physical Education (second semester).

Continuation of Course 403. This semester's work includes baseball and track and field athletics.

Two hours each week.

No student admitted to this course without the consent of the Physical Director.

#### FOR BUSINESS STUDENTS

#### 501 Physical Education (first semester).

Required of students in the business class.

Similar to Course 101, but more advanced. Mass drills in class and apparatus work of the heavier type. Games, mat exercises and lectures on physical education. Three times a week. Credit given. Required.

# 502 Physical Education (second semester).

Continuation of the work begun in Course 501, with basketball and track and field work in the spring. Lectures on physical education. Three times a week. Credit given. Required for graduation.

#### SHORT COURSE STUDENTS IN AGRICULTURE

#### 601 Physical Education.

Required of students in the Short Course in Agriculture. Work in mass formations and on apparatus, with an emphasis on coordination. Lectures on personal hygiene and first aid. Three times a week.

#### PREPARATORY STUDENTS

#### 603 Physical Education (first semester).

Required of all Preparatory students. This course consists of free-arm drills and setting-up exercises, marching tactics, and light apparatus work.

### 604 Physical Education (second semester).

More advanced work with light apparatus; work on the buck, horse, mats and parallels. Work given to build up the vitality and not to develop large muscles.

# 700 Physical Education (special classes).

Open to all students.

A. Cross-country running during the fall and spring. Those students desiring to do so may substitute a certain amount of cross-country running for the regular gymnasium work,

- B. Wrestling.—A class in wrestling, in which all of the holds, breaks and counters are given, is formed. A student may substitute one hour's work a week in wrestling for one hour of his regular gymnasium work. One hour per week.
- C. Boxing.—Class in boxing, in which all of the blows, parries, guards and counters are given, is formed. Students may substitute one hour's work in boxing for one hour of regular gymnasium work. One hour per week.
- D. Class in Fencing .- Open only to upperclassmen, with the consent of the Director.
- E. Special Class.—A special class is formed for those who, on account of deformities, are unable to take the regular work of the department. The work of this class is suited to the needs of the individuals.
- F. Individual corrective work for all students who show in their examination the need of such work. The idea of this work is to correct deformities so that the student may get the maximum value from the regular class work.
- G. A class is organized and maintained for Sophomore, Junior and Senior students. Meets twice a week. This work is optional with the students.
- H. Advanced Gymnastic Class.—Open to all students. A special class is formed for students who desire to do advanced work on the horse, parallel bars, horizontal bar, flying rings, mats, tumbling and clubswinging. This comprises the regular gymnasium team for exhibition purposes. Three hours per week.

#### ATHLETICS

Teams are now maintained in football, baseball, basketball, track and field athletics, tennis, wrestling, gymnastic work. The above forms of athletics are now recognized by the Southwest Conference, and the College gives letters to those complying with the requirements.

# DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

ANNA MILLER, Director MARY BARLOW, Assistant

The gymnasium for women, located in the Woman's Building, is an unobstructed room 32x63 feet, and is equipped with all of the modern gymnasium apparatus. There is a locker and dressing room in connection, supplied with a large number of steel lockers. There are also shower baths. In the rear of the building are the women's outdoor tennis courts.

A regular costume is required. In order that these may be uniform in pattern and color, they are ordered by the College. The cost of the suit, including shoes, is about \$6.00.

At the beginning of the first semester each young woman is given a careful examination. Personal history, measurements, deformities are taken and recorded, with an examination of the vital organs. This examination is repeated during the second semester and comparison made at both examinations with the average. Suggestions and prescriptions suited to the needs of the individual are based upon this examination.

Physical training is prescribed for all Freshman, Sophomore and Business girls, including special students, throughout the College year, three periods a week.

The prescribed courses are designed to secure a high degree of organic power, harmonious physical development, and a reasonable degree of skill and grace.

# **SUBJECTS**

101-102. Three hours per week.

Required of members of the Freshman class and Business class.

The work of these classes consists of floor work, emphasizing carriage and coordination of muscles. Movements with apparatus, progressive back and abdominal exercises, and gymnastic games are given.

103-104.

Required of members of the Sophomore class.

This course consists of floor work, apparatus, with more advanced work than Courses 101-102. Indoor, outdoor and folk games are taught.

105-106-107-108.

Optional and elective for Junior and Senior girls in the Schools of Science and Literature, Education and Home Economics.

A. First Semester. Plays and games, including theory. Credit 1.

In this course the theory of plays and games will be studied. It is also the purpose to provide explanation of and practice in a considerable number and variety of the playground games; dramatic games; traditional games and song plays; games of imitation, gesture, choosing and catching; games which appeal to the young by the stirring energy of their movement and their imaginative pantomime. Studies are made of children's games from all parts of the world, and of the simplest dances of primitive people and of the folk of Europe.

B. Second Semester. Theory of Physical Education. Credit 1.

A study is made of the Swedish days order of gymnastics and calisthenics. The following will also be considered: History and development of physical education; growth and development of the child; personal hygiene; how to observe and criticise the work of pupils, and plan and arrange lessons. This course will also include methods and exercises used for corrective and therapeutic purposes.

A general treatment of massage is given. In specific cases, insufficient osseous development, fractures, dislocations, sprains, muscular rheumatism, colds, insufficient respiratory power and neuralgic headache are considered.

### 101 Personal Hygiene. Credit 1.

This course considers health in its social and economic aspects and presents personal hygiene as the study by means of which health and efficiency are improved and conserved; facts and principles relating to the body's construction and function which may strengthen the argument in favor of hygienic living; improvement of health and prevention of diseases.

#### CORRECTIVE GYMNASTICS

For those unable to take the work of the regular required courses this course will be substituted. Hours to suit.

#### ATHLETICS

- A. Basketball.—Each class has a basketball team, and an interclass schedule is played.
- B. Field hockey and cross-country walking. Open to all classes during the months of October, April and May.
- C. Tennis.—Tennis is played on the College courts during favorable weather. A tennis club is formed which is under the direction of the Girls' Athletic Association. The club is open to all girls of the College. The dues are 50 cents per year.
- D. May Festival Dances.—For the May Festival each year the Girls' Athletic Association gives a May pole dance, composed of the rhythmical plays and games taught in the gymnasium throughout the school year.

# DEPARTMENT OF MILITARY SCIENCE AND TACTICS

GEO. W. EWELL First Lieutenant, Third Infantry Professor of Military Science and Tactics

M. McDonald Sergeant Major, United States Army, Retired Assistant

This institution, being one of the beneficiaries of the Act of Congress of 1862, instruction in military tactics is made compulsory.

The department is in charge of an officer of the United States Army, detailed by the War Department, as professor of military science and tactics.

Military discipline is exercised with firmness, kindness and justice. It tends to cultivate habits of punctuality, alertness and the sense of personal responsibility. It also teaches attention to

detail, cleanliness of person and of dress, a high sense of honor and respect for those in authority.

It helps the student to prepare himself the better for any position in life, because employers like to find men who are imbued with the idea of doing exactly as they are instructed by one who is authorized to direct them, and who have been trained to exercise quick yet sound judgment in any emergency that arises concerning which they have no definite instruction. These qualities are thoroughly inculcated in any person by a military training, such as the College endeavors to give them. In addition, the drills give a graceful carriage to the student, assist in the promotion of the health of the individual, and are an added benefit to the gymnasium work of the College.

Former President Taft, on February 25, 1911, following a review of the 1,400 cadets of the University of Illinois, wrote as follows to the President of that institution: "We are all in favor of college athletics, but one of the defects of athletics is the tendency to confine work to those who are naturally best adapted to it, while the great student body takes no active part in the games. This is not true of military training that comes from the organization and maintenance of a school regiment."

The course of instruction is made to conform strictly to the provisions of General Orders No. 70, War Department, series of 1913. In compliance with the requirements of that order, the course is both practical and theoretical, and will be applied as follows:

### Practical

- 1. Infantry Drill Regulations.
- 2. Advance Guards, Rear Guards, Outposts, Messages and Orders.
  - 3. Marches, Map Drawing and Entrenchments.
- 4. Ceremonies of Review, Inspection, Parades, Escort of the Colors, and Guard Mounting.
- 5. Gallery Practice, Nomenclature of the Rifle, Sighting Drills, Position and Aiming Drills, and Deflection and Elevation Correction Drills.

- 6. Range Practice with Service Ammunition.
- 7. Field Problems with Blank Ammunition.

All students not physically disqualified are required to take the practical instruction during the first two years of their attendance at the College. During the first semester there will be three hours' drill per week, while the second semester will be devoted to two drills per week with one hour's instruction in military science in the subjects as set forth in the following table:

# Theoretical Military Science

- 1. Infantry Drill Regulations, United States Army, 1911.
- 2. Small Arms Firing Manual, 1913.
- 3. Field Service Regulations, United States Army, 1914.
- 4. Manual of Guard Duty.
- 5. Outlines of First Aid to the Injured.
- 6. Lectures on various military topics.

Satisfactory completion of the prescribed work is required before graduation.

Students entering the College from other institutions where officers of the Army are on duty will be given credit for the work for which they hold certificates.

Students who show aptitude for the military service are recommended for appointment as second lieutenants in the Army. Positions in the Engineer Corps of the Army are open to certain students of the Engineering Departments of the College. A list of students who have shown special ability in engineering is kept by the War Department in order to be able to locate good engineers in case of need. Graduates of the College are also selected for service in the Philippine Constabulary and are not required to take the mental examination if recommended by the College authorities.

# Equipment

The War Department has supplied the College with 560 U.S. magazine rifles, cal. .30, model of 1898, 40 U.S. magazine rifles,

cal. .30, model of 1903, 16 U. S. magazine rifles, cal. 22, and 600 sets of infantry equipment. Swords, targets, target supplies, ammunition for all rifles and cleaning material are furnished to the College free of charge by the War Department.

Students are required to furnish themselves with the regulation uniform, which is modeled after the U. S. Army service uniform.

# Organization

All young men are required to enroll in the Military Department.

Those who are entitled to be excused must at the time they enroll make a written application to be placed on the unassigned list. All students who are on the unassigned list will be excused from all military duty.

The Corps of Cadets has been organized into a regiment consisting of a band and three battalions of four companies each.

# Best Drilled Company in the Regiment for the College Year, 1914-15

Best drilled company in the regiment for the College year, 1914-15:

Company "D".

Captain LOYD R. JONES.

First Lieutenant, L. E. WOODWORTH.

Second Lieutenant, W. B. ELSTON.

First Sergeant, E. A. KISSICK.

Captain Loyd R. Jones was presented with a special saber by the College as a reward for his excellent work in the Military Department during the College year, 1914-15.

The names of all the company officers, of the best drilled company and the company letter have been engraved on a silver band and placed on the staff of the College flag.

The commissioned officers, as a reward for excellent service, are presented by the College with an engraved commission and a saber upon graduation.

The officers receive pay from the College for their services.

### Rifle Club

The Rifle Club of the College is a part of the National Rifle Association of America. All firing is under the supervision of a judge selected by the A. R. A. Medals and qualification insignia are furnished by the War Department.

### Officers of the Club

President, G. L. GLOECKNER. Secretary-treasurer, E. L. CHASE. Captain of Team, H. B. HILDEBRAND. Number of members, 125.

### EXTENSION DIVISION

The Extension Division of the A. and M. College embraces all of its activities for the instruction of people who are not resident at the College. All persons who are pursuing courses given at the College covering more than two weeks are considered residents. The A. and M. College is doing all that it can to extend its usefulness to all the people of the State as far as possible.

The general plan of Extension work contemplates first, a County Agent in every county in the State working full time, assisted by a Woman Agent for women and girls' work working not less than nine or ten months per year.

The County Agent will conduct Farm Demonstration Work, Farmers' Institutes, Boys' and Girls' Club Work, and have general charge in his county of the Agricultural Extension Work of the A. and M. College and the United States Department of Agriculture.

The Woman Agent will have special charge of Demonstrations in Domestic Science and Home Economics, Girls' Club Work and Club Work for Women, and be the representative in her county of the A. and M. College and the United States Department of Agriculture in all lines of Extension Work for women and girls.

The County Agents will be under the special supervision of District Agents who will visit them regularly and assist them in all matters pertaining to their duties.

Specialists from the College, the Experiment Station and the United States Department of Agriculture and elsewhere will assist the County Agents under direction of the Extension Division as much as possible.

A specialist in Hog Cholera Eradication Work, one in Dairy Work, another in Poultry Club Work, and still another in Pig Club Work, from the United States Bureau of Animal Industry has been secured by the Extension Division to assist the County Agents in these lines of work. We hope to secure still others for other lines.

A specialist in Rural Sanitation has been employed to devote full time in cooperation with the District, County and Women Agents in efforts to teach the laws of health and better sanitation in rural districts and small towns.

Boys and Girls' Clubs.—For the crop year of 1916 there will be the following clubs: Corn, Kafir (including Feterita, Milo and all the grain sorghums), Cotton, Pig, Canning, Poultry, Peanut, Crop Rotation and Better Bread. Write Extension Division for additional information.

Fairs.—Special work will be done to encourage and help in the holding of Community and County Fairs all leading up to exhibits of agricultural, livestock and home products at the State Fairs. A school at the State Fair for club prize winners will be held. Several \$160.00 and \$100.00 scholarships in the A. and M. College and numerous lesser prizes will be awarded in the various club contests. Write for special information.

Movable Schools.—A corps of from three to five lecturers from the College will conduct a school for one week in each county for farmers, their families and others, somewhat along the line of the Farmers' Institute plan. The points in the county and the time spent at each point, as well as all other local details, will be arranged by the local County Agents.

As provided by special legislative enactment, the work of the Department of Agriculture for Schools will be conducted as here-tofore. This work has to do with the teaching of Agriculture and Domestic Science in the common schools of the State. Teachers and County Superintendents of Schools should avail themselves of the help and cooperation of this department.

Under the auspices of the agents of the Extension Division there were held 1,667 farmers' meetings. The agents spoke on some phase of their work at 2,931 meetings, at which there was a total approximate attendance of 141,413 people. There was a

total of 731 field meetings with a total approximate attendance of 9,769. In the performance of their duties the agents report making a total of 51,843 visits to demonstrators, cooperators, business men and club members. In doing this they traveled 127,176 miles by railroad, 106,032 miles by team and 84,000 miles by other conveyance. There were a total of 20,880 personal calls at their offices or homes, and 13,494 telephone calls. Total number of Boys' and Girls' Club members enrolled was 11,960. Total number of Boys' and Girls' Club members enrolled by the A. and M. College was 20,500; by the Farmers' Cooperative Demonstration Work 6,398.

To cover all the various activities of the Extension workers of the A, and M. College and the United States Department of Agriculture during 1915 would take too much space. It is sufficient to say that more or less work was done on nearly every problem that affects the wellbeing of the farmers and their families, from the economic production of farm products to saving of human life by making successful war on typhoid fever.

### Union of Federal and State Work

In July, 1914, the State Board of Agriculture, to comply with suggestions from the United States Department of Agriculture relative to meeting the requirements of the Smith-Lever Law, abolished the position of Dean of Extension Work at the A. and M. College and created the position of Director of Extension; and to further harmonize and make more effective the Agricultural Extension Work, being done in Oklahoma by the A. and M. College and Farmers' Cooperative Demonstration Work, on July 25 the State Agent of the Farmers' Cooperative Demonstration Work was elected to the position of Director of Extension of the A. and M. College. The past year has demonstrated the wisdom of this union. It has spelled efficiency and economy.

# Hog Cholera and Tick Eradication Work

An immense amount of work was done combating hog cholera. During the year the County Agents have vaccinated a total of 129,568 hogs. The serum-alone treatment was administered to 36,772, and the double or simultaneous treatment was administered to 92,796. Of these 63,517 were actually vaccinated or treated by the agents themselves.

The agents have been very active in tick eradication work, cooperating always with State and Federal officials. They claim having influenced the building of 124 dipping vats; having helped in the construction of seventeen of them, helped to fill with the solution twenty-seven of them, and tested the solution in nineteen. They report the building of 220 dipping vats in the State during the year 1915 by all forces. They estimate that there were dipped during the year 399,013 cattle for black leg and 13,664 for other troubles. Of these 15,626 were actually treated by the agents.

Thirty-seven of the agents have instruments of their own for the vaccination of hogs and cattle.

#### Farmers' Clubs

During the year the County Agents have assisted in the organization of 185 farmers' clubs for community improvement and cooperation with a total membership of 4,783.

# Road Improvement Work

All the County Agents have assisted more or less in road improvement work. They report having put on 241 road improving demonstrations resulting in the improvement of 999 miles of road.

#### AGRICULTURAL EXPERIMENT STATION

The Experiment Station was established by provision of an Act of Congress approved March 2, 1887, commonly known as the Hatch Act, and entitled "An Act to establish Agricultural Experiment Stations in connection with Colleges established in the several States under the provision of an Act approved July 2, 1862, and of the acts supplementary thereto". Its objects are defined in the second section of the Act as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches, or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued in a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of different kinds of foods for domestic animals; the scientific and economic questions in the production of butter and cheese; and such researches or experiments bearing directly on the agricultural industry in the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories."

This Act has been supplemented by the Adams Act, approved March 16, 1906, which is designed to enlarge the scope and usefulness of these Stations.

The Oklahoma Agricultural Experiment Station was located at the A. and M. College at Stillwater in July, 1891. In addition to the funds received from the two Federal appropriations above mentioned, which amounts to \$30,000 per annum, the State Board of Agriculture, as the Regents of the A. and M. College,

has made liberal provision by appropriating funds from the legislative appropriations for the further maintenance and support of the Experiment Station.

The results obtained in the various lines of experiment work are published as bulletins. In addition to the regular bulletins, giving the results of this work, a series of popular publications known as circulars are issued from time to time as conditions would seem to warrant to be used by the extension service in distributing valuable information to the farmers.

A mailing list is maintained which numbers at the present about 17,000 names, principally of farmers in various parts of the State. Any citizen of the State interested in agriculture may have the bulletins and other publications from the Station sent free on application to the Director of the Experiment Station asking to have his name placed upon the regular mailing list.

Such portions of the College farm, which comprises about 1,000 acres, as is needed for Experiment Station and research work is set aside for this purpose; also such livestock as is needed for feeding experiments is utilized by the Station men. All the scientific laboratories of the College are available for research work, and many of the scientific departments of the institution are interested in carrying on different projects under the supervision of the Experiment Station officers.

# REGISTER OF STUDENTS

## GRADUATE STUDENTS

Abernathy, OscarB.	S.,	1915	Hollis
Buffington, BethaB.	S	1012	Stillwater
Correll, Vincent IB.			
Crawford, ChasB.			
Friedemann, William GB.	S.,	1914	Stillwater
Hamilton, FearnB.			
Heston, AdrianB.			
Hiet, Melvin EB.			
Hiet. SadieB.	S.,	1912	Stillwater
Tablow, Mrs. ChasB.	S.,	1915	Stillwater
Jackson, W. EB.			
James. HelenB.			
Lahman, RuthB.			
McElrov, Clarence HB.	S.,	1906	Stillwater
Marker, WalterB.	S.	1914	Orlando
Melton, ArmonB.			
Oldham, Albert EB.	≥.,	1915	Stillwater
Orr, Paul FB.			
Rapp, C. WB.	S.,	1915	Stillwater
Rose, RollinB.			
Russell, MamieB.			
Russell, Mainle	2.,	1913	warner
Spencer, E. L. B.			
Walters, MargueriteB.	S.,	1910	Stillwater
Whipple, A. FB.	S.,	1914	Stillwater
	_,,		

## UNDERGRADUATE STUDENTS

#### Senior Class

Adams, Kathryn Anderson, Albert A Andrew, Carl S	"Agriculture (Agronomy) "Education "Home Economics "Electrical Engineering "Agriculture (Animal Husbandry) "Agriculture (Agronomy)	Hollis Tishomingo South Haven, Kans. Stillwater
Bauman, Chas	Science and Literature	Bessie
Beck, Paul V	Science and Literature	.Hunter
Biggin, Dorothea C	Education	Stillwater
Bonar, Mollie M	Education	Stillwater
Boyd, O. C	Agriculture (Horticulture)	.Hooker
Bridges, J. W	Education	Stillwater
Briggs, Glen	.Agriculture (Agronomy)	Carter
	Electrical Engineering	
Brower, Laura	Home Economics	Luther
Carpenter, Chas. L. Carter, E. O. Clausen, Elsie Cooley, D. F. Corbin, Bert O. Cummings, Maxie  Davis, George E. Denton, Elizabeth	Science and Literature  Agriculture (Animal Husbandry)  Electrical Engineering  Education  Electrical Engineering  Electrical Engineering  Home Economics	Bridgeport Turley Stillwater Stillwater Stillwater Godwell Stillwater Newkirk
Freeman Ray E	Agriculture (Animal Husbandry)	Cutheia
_	Education	
Gordon, May F.	Home Economics	Stillwater
Graham, Milton	Education	Marietta
Gray, Mina	Home Economics	.Mav
Green, William J	Agriculture (Agronomy)	Wakita
, , , , , , , , , , , , , , , , , , ,		
Harvey, Ruth Hatch, Hazel A	Science and Literature	Stillwater Enid

Hays, Clara	Education Education Education Agriculture (Dairying) Education Home Economics Commerce and Marketing Agriculture (Animal Husbandry) Education	Okarche
Heilman, Paul L.	Education	Wagoner
Hendrickson Fime	Agriculture (Dairring)	Roynton
Heston, Lucille	Education	Stillwater
Hewett, Norma	Home Economics	Oklahoma City
Horner, John T	Commerce and Marketing	Enid
Horton, E. E.	Agriculture (Animal Husbandry)	. Heath Springs, S. C.
Houck, Afton	Education	Stillwater
Tantanan T A	Civil Engineering	Hammatta
Jackson, J. A	Civil Engineering	Stillwater
Kenworthy, Chester	Agriculture (Agronomy)	Muskogee
Krone, Floy C	Agriculture (Agronomy)Education	Chandler
Lewis, Clarence W	Electrical Engineering Agriculture (Animal Husbandry) Electrical Engineering Agriculture (Animal Husbandry) Science and Literature	Wakita
Loomis, Alden H	Agriculture (Animal Husbandry)	Wakita
Yowers Phil H	Agriculture (Animal Husbanday)	vvaukomis
Lowery, Fill. H	Science and Literature	Stillwater
McCarrel, Fred	Education	Wanette
35 317-14- D	Machaniani Engine	1171
Marsn, Walter K	Mechanical Engineering	. vv aynoka
Mondy Reulah	Home Foonomics	Stillwater
Moore Mrs Helen Kyger	Education	Stillwater
Moorman, Helen	Civil Engineering Home Economics Education Home Economics	Stillwater
Naylor, Harold	Agriculture (Animal Husbandry)	. Hollister
Nelson, Vinita	Home Economics	Stillwater
Notson, F. Carl	Electrical Engineering	. Wellston
Pierson, Jas. W	Agriculture (Animal Husbandry) Home Economics	Pond Creek
Radnish, Helen	Home Economics	.Stillwater
Ransom, George R	Agriculture (Animal Husbandry)	Pond Creek
Reichman, Maude	Architecture	Stillwater
Robinson Toe I	Architecture	Omega
Rogers. Bertha	Agriculture (Animal Husbandry)	Pawhuska
arogery) were minimum		
Savage, Orville M	Agriculture (Animal Husbandry)	Blackwell
Scott, J. Herman	Civil Engineering	. Stillwater
Scrivner, Russell	Agriculture (Animal Husbandry)	Maysville
Sexauer, Dorothy	Home Economics	Clinton
Shiller Henry H	Mechanical Engineering	Stillwater
Stanshury, Anna A	Science and Literature	Stillwater
Stout, C. G.	Mechanical Engineering	Wellston
Sullivan, Cyril C	Agriculture (Animal Husbandry) Civil Engineering Agriculture (Animal Husbandry) Home Economics Mechanical Engineering Science and Literature Mechanical Engineering Agriculture (Animal Husbandry)	Stillwater
mi 01: B		0.44
Thomas, Olive B	Home Economics	Stillwater
Thompson, Pauline	Commerce and Marketing	Kaiston
Vance, Alfred W	Mechanical EngineeringEducation	. Blackwell
Vermillion, Rachel	Education	.Stillwater
Waters, George A., Jr	Agriculture (Animal Husbandry) Commerce and Marketing Education Electrical Engineering Commerce and Marketing	Cawnee
Wheeler Birdie	Education	Stillwater
Williamson, Emery	Electrical Engineering	Stillwater
Wilson, O. G	.Commerce and Marketing	Cherokee
Wright, Gertrude	.Education	.Olney
Wright, Harley M	Education	Cashion

# Junior Class

	Home Economics	
Black, Tames A	Agriculture (Animal Husbandry)Agriculture (Agronomy)Veterinary MedicineAgriculture (Agronomy)Home EconomicsAgriculture (Animal Husbandry)	Oklahoma City
Booth, John V	Agriculture (Agronomy)	Milton
Boyd, H. C	Veterinary Medicine	Hooker
Brodell, Albert P	Agriculture (Agronomy)	Keystone
Brumbaugh, Norma	Home Economics	Broken Arrow
Buddruss, Edward	Agriculture (Animal riuspandry)	Muskogee
Carlson, Grace	Home Economics	Meno
Danton Father	Home Economics	Mamiliale
Dielecon Knowlton	Science and Literature	Wolters
Dillon Lucille	Science and Literature	Muscatine Iowa
Douglas, Marion	Home Economics Science and Literature Science and Literature Education	Yale
	Home Economics	
T	Education.	C+*11
Fellows, Iris	A griculture (A grown army)	Stillwater
Finnell, H. H.	Home Economics	Clinton
Forrester Chas. T	Agriculture (Animal Husbandry)	Stratford
Forsyth, Andrew E.	Agriculture (Agronomy)	Bushvhead
Forsyth, Fred K	-Architecture	. Bushyhead
Frieday, Gladys	Home Economics	Stillwater
French, Mattie	Education Agriculture (Agronomy) Home Economics Agriculture (Animal Husbandry) Agriculture (Agronomy) Architecture Home Economics Home Economics	., Stillwater
	Science and Literature	
Harnden, Millard G	Agriculture (Dairving)	Stillwater
Haymes, Winton R	Agriculture (Animal Husbandry)	Foyil
Helmer, Richard A	Civil Engineering	Gotebo
Hildebrand, Harry B	Electrical Engineering	Kildare
Hill, Ruth	Home Economics	Oklahoma City
Hinkel, John W	Science and Literature	Stillwater
Hitchcock, Edith	Fducation	Stillwater
Hoke Roy	Agriculture (Agronomy)	Ouav
Horton, Wayne	Agriculture (Dairying) Agriculture (Animal Husbandry) Civil Engineering Electrical Engineering Home Economics Science and Literature Education Education Agriculture (Agronomy) Agriculture (Animal Husbandry)	Seminole
Tleand W T	Veterinary Medicine	Chialenaha
Twee Farl F	Veterinary Medicine	CHICKASHA
		Averv
	Science and Literature	
Jones, Fred L	Science and Literature	Stillwater
Jones, Fred L	Science and Literature	Stillwater
Jones, Fred L	Science and Literature	Stillwater
Jones, Fred L	Science and Literature	Stillwater
Jones, Fred L	Science and Literature	Stillwater
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Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Animal Husbandry)  Agriculture (Horticulture)  Civil Engineering	. Stillwater . Hartshorne . Biglow, Ark. . Hunter . Altus . Yukon . Stillwater
Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Animal Husbandry)  Agriculture (Horticulture)  Civil Engineering	. Stillwater . Hartshorne . Biglow, Ark. . Hunter . Altus . Yukon . Stillwater
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Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Horticulture)  Civil Engineering  Science and Literature  Electrical Engineering  Home Economics  Education  Civil Engineering  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Civil Engineering  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Veterinary Medicine  Agriculture (Animal Husbandry)  Home Economics  Agriculture (Animal Husbandry)	Stillwater  Hartshorne Biglow, Ark. Hunter Altus Yukon  Stillwater  Lone Wolf Pineland, Texas  Ardmore Hickory Pawnee Lawton Calumet Stillwater Stillwater Stillwater Byron Kenefic
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Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Horticulture)  Civil Engineering  Science and Literature  Electrical Engineering  Home Economics  Education  Civil Engineering  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Civil Engineering  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Veterinary Medicine  Agriculture (Animal Husbandry)  Home Economics  Agriculture (Animal Husbandry)	. Stillwater . Hartshorne . Biglow, Ark Hunter . Altus . Yukon . Stillwater . Lone Wolf . Pineland, Texas . Ardmore . Hickory . Pawnee . Lawton . Calumet . Stillwater . Stillwater . Deer Creek . Byron . Kenefic . Paden . Lidgerwood, N. D.
Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Horticulture)  Civil Engineering  Science and Literature  Electrical Engineering  Home Economics  Education  Civil Engineering  Agriculture (Dairying)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Veterinary Medicine  Agriculture (Animal Husbandry)  Home Economics  Agriculture (Animal Husbandry)  Electrical Engineering  Civil Engineering  Civil Engineering  Civil Engineering	Stillwater  Hartshorne Biglow, Ark. Hunter Altus Yukon  Stillwater  Lone Wolf Pineland, Texas  Ardmore Hickory Pawnee Lawton Calumet Stillwater Stillwater Deer Creek Byron Kenefic  Paden Lidgerwood, N. D.  Stillwater
Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Horticulture)  Civil Engineering  Science and Literature  Electrical Engineering  Home Economics  Education  Civil Engineering  Agriculture (Dairying)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Veterinary Medicine  Agriculture (Animal Husbandry)  Home Economics  Agriculture (Animal Husbandry)  Electrical Engineering  Civil Engineering  Civil Engineering  Civil Engineering	Stillwater  Hartshorne Biglow, Ark. Hunter Altus Yukon  Stillwater  Lone Wolf Pineland, Texas  Ardmore Hickory Pawnee Lawton Calumet Stillwater Stillwater Deer Creek Byron Kenefic  Paden Lidgerwood, N. D.  Stillwater
Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Horticulture)  Civil Engineering  Science and Literature  Electrical Engineering  Home Economics  Education  Civil Engineering  Agriculture (Dairying)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Home Economics  Veterinary Medicine  Agriculture (Animal Husbandry)  Home Economics  Agriculture (Animal Husbandry)  Electrical Engineering  Civil Engineering  Civil Engineering  Civil Engineering	Stillwater  Hartshorne Biglow, Ark. Hunter Altus Yukon  Stillwater  Lone Wolf Pineland, Texas  Ardmore Hickory Pawnee Lawton Calumet Stillwater Stillwater Deer Creek Byron Kenefic  Paden Lidgerwood, N. D.  Stillwater
Jones, Fred L	Science and Literature  Science and Literature  Home Economics  Agriculture (Dairying)  Agriculture (Horticulture)  Civil Engineering  Science and Literature  Electrical Engineering  Home Economics  Education  Civil Engineering  Agriculture (Dairying)  Agriculture (Animal Husbandry)  Agriculture (Dairying)  Home Economics  Science and Literature  Electrical Engineering  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Agriculture (Animal Husbandry)  Literature (Animal Husbandry)  Electrical Engineering  Civil Engineering	Stillwater  Hartshorne Biglow, Ark. Hunter Altus Yukon  Stillwater  Lone Wolf Pineland, Texas  Ardmore Hickory Pawnee Lawton Calumet Stillwater Stillwater Deer Creek Byron Kenefic  Paden Lidgerwood, N. D.  Stillwater

100	OKLAHOMA A. & M. COLLEGE	
D T	Home Feenemies	C4:11-mator
Rapp, 1rma	Home Economics Agriculture (Animal Husbandry) Science and Literature Home Economics Home Economics	Stillwater
Pohinson William R	Science and Literature	Ougles City Ohio
Pockey Nellie	Home Feanomics	Stillwater
Russell Margaret	Home Economics	Warner
Smith, Grover C	Education Home Economics Agriculture (Dairying)	Stillwater
Spurrier, A. Kara	Home Economics	Stillwater
Surtees, L. Vincent	Agriculture (Dairying)	Mount Holly, N. J.
Wheeler, C. P	Agriculture (Animal Husbandry)Mechanical EngineeringMechanical Engineering	Blackwell
Wilson, Joseph	Mechanical Engineering	Stillwater
Wyant, Lynton	Mechanical Engineering	Fairview
	Sophomore Class	
At Daymond F	Fagineering	Fradorials
Ahrens, Raymond F	A griculture	Stillwater
Augook Thomas M	Engineering Agriculture Commerce and Marketing	Altua
Aycock, Inomas Ma		211643
Baker, John	Agriculture	Stillwater
Bandelier, George	Engineering	Stillwater
Barnes, Hazel L	Home Economics	Banner
Barney, Wm. Ennis	Engineering	Stillwater
Bartlett, Alice	Agriculture Engineering Home Economics Engineering Education Agriculture Agriculture Engineering Engineering Engineering Engineering Engineering Agriculture Home Economics Education Agriculture Home Economics Education Agriculture Engineering Agriculture Home Economics	Stillwater
Beck, Wm. J	Agriculture	Hunter
Becknell, Lionel	Agriculture	Okemah
Bever, F. L.	Engineering	Skedee
Bradshaw, D. I	Engineering	Enand, IV. C.
Brewer, Chas. E	A grigulture	Oklahama City
Bright, M. H.	Home Economics	Luther
Brown Mary	Education	Agra
Rryant M Ray	Agriculture	Frederick
Burnham, Henry W	Engineering	Frederick
Byrd. Bertie	Home Economics	Fort Towson
_,,	Science and Literature Commerce and Marketing Science and Literature Agriculture Home Economics Agriculture Home Economics Agriculture Science and Literature Science and Literature Education Engineering Agriculture	
Caldwell, Virgil	Science and Literature	Stillwater
Campbell, Jefferson	Commerce and Marketing	Mangum
Cantwell, J. W., Jr	Science and Literature	Stillwater
Carlson, Floyd	Agriculture	Meno
Carlyle, Kathlene	A	, Stillwater
Carter, G. C	Home Footomics	Okemah
Chewning Wesley P	Agriculture	Stillwater
Clay. Henry	Science and Literature	Ninnekah
Cobb. Ruth C	Science and Literature	Dewey
Cole, Pearl	Education	Cushing
Coleman, Lester	Engineering	Red Rock
Colglazier, Ray	Agriculture	Stillwater
5		
Donahoo, Grace	Home Economics	Mangum
Douglas, Glen	Home Economics Agricultude Agriculture	Guthrie
Ellis Arthur	Architecture	Oklahoma City
Emmons, Clarence D	Agricultude	Vinita
Emmons, Mrs. Clara M	Architecture Agricultude Home Economics	Vinita
	,	
Fair, Rinaldo M	Education	Valliant
Fellows, Reda	Home Economics	Stillwater
Ferguson, Audrey	Education Home Economics Home Economics Agriculture Agriculture Agriculture	Stillwater
Fish, Wayne	Agriculture	Helena
French, Earl K	Agriculture	Stillwater
riost, John A	Agriculture	Stillwater
Garlock, Harry M	Agriculture	Vici
Geren Louis C	Agriculture	Droden
Gillum I. I.	Science and Literature	Minco
Gloeckner G L	Agriculture	Equetteville Texas
Goe, Walter B	Education	Hayward
Gray, Julia	Agriculture Commerce and Marketing Agriculture Science and Literature Agriculture Education Home Economics	May
Hall, Gertrude	Commerce and Marketing	Stillwater
Hatcher, Otto	Agriculture	Stonewall
Hayes, Philip	Education	Newkirk

Hays, George P	Agriculture Home Economics Agriculture Education Home Economics Home Economics Home Economics Commerce and Marketing Education Agriculture	Okarche
Hildebrand Fric R	Home Economics	Tribbey
Hoggard, Paul C	Education	Stillwater
Hopkins, Blanche	Home Economics	Stillwater
Hopkins, Maud	Home Economics	Stillwater
House Kathless	Home Economics	Stillwater
Hueston, Cecil I.	Commerce and Marketi	Stillwater
Hughes, Pauline	Education	, Tulsa
Hurst, J. B	Agriculture	Jefferson
		Jerrerson
Jacob, Celia	Home Economics	Stillwater
Jenkins, Henry	Home Economics	- Frederick
Johnson, Al. Manner	Commerce and Marketing	Tulsa
Kelly, Carson	Science and Literature	Stillwates
Kenny, Roy W	Agriculture	Blackwell
Kilnatrick Roy H	Agriculture	McLean, Tex
Krone, Jessie	Science and Literature Agriculture Agriculture Agriculture Home Economics	Hunter
		Chandler
Leslie, Lewis F	Science and Literature	Granton
Lowry, Keith	Science and LiteratureEducation	Stillwater
McKee, Calvin	Architecture	C
McNeely, Oscar	Agriculture	Cooperton
McTaggart, Ernest	Architecture	Stillwater
Mahaffey May	A contact	
Markwell, Nettie	Home Fconomics	Stillwater
Markwell, Hazel	Education	Stillwater
Maroney, Hugh	Science and Literature	Stillwater
Martin, J. Elmer	Science and Literature	Mounds
Millikan, Chas V	Science and Literature	Stillwater
Minor, Nelson N.	Agriculture	Stillwater
Mitchell, Gail V	Engineering	Stillwater
Murphy, Henry	Agriculture Home Economics Education Science and Literature Science and Literature Science and Literature Science and Literature Agriculture Engineering Agriculture	Glencoe
Neerman, Katherine	Science and Literature	
Nelson, Joseph	Engineering	Tulsa
Nelson, Ivo A.	Science and Literature	Stillwater
Netherton, Cecil	Science and Literature	Bernice
Olentine, Hazel	Home Formanian	
Orr, Don M.	Agriculture	. Muskogee
Owsley, Wm. A	Home Economics	Stillwater
Patterson Allen	T. 3	. Dilli Water
Putman, John E	Education	Newkirk
	gricuiture	. Woodford
Ranes, George	Engineering	Lawton
Rinehart Virgil	Science and Literature	Stillwater
Robinson, Chas	Commerce and Market	Stillwater
Ross, George S	Engineering	Stillwater
Sahmura A	***	Shawnee
Scrivner Lames	Home Economics	Orlando
Selph. Lavia	Home Foots	Maysville
Snyder, Beryl	Education	Stillwater
Southwick, Ivan A	Engineering	Garber
Swim Leslie D	Architecture	Anadarko
Stringer, Grady	. Engineering	Stillwater
	Home Economics Engineering Home Economics Education Engineering Architecture Engineering Science and Literature	Ochelata
Taggart, Jane G	Architecture	Stillwater
Tilton Waltha	Home Economics	Stillwater
Trekell Edna	Education	Nardin
	Architecture Home Economics Education Home Economics	Hunter
Upton, John F	Engineering	Mounda
Varrillian Dust		Zarounus
vermillion, Ruth	Home Economics	Stillwater
Walters, Toe	Agriculture	0
Webb, Robert T	Agriculture Engineering	Stillwater
		Lecuey

Webb, Nix	Engineering		Tipton	
West, Wm. E	Agriculture		Warner	
Whittenberg, George	Engineering		Stillwater	
Wilber, Philip	Architecture		Guthrie	
Winkleman, Magdalen	M Education		Chandlet	
Winn, Annaliza	Home Economic	rs .	Lakema	
Witte, Harold				
Womble, M. R	Engineering		Tulsa	
Woodruff, Wayne				Kans
Woodson, Mortimer	Agriculture	/	Walters	*********
Wright, Noah F	Engineering		Cashion	
	Freshman	n Class		
Adams Tee A	Commerce and	Marketing	Foss	

# Adams, Lee A Commerce and Marketing Foss Aikins, Vernon W Architecture Lamont Alexander, Nell Home Economics McKenzie, Tenn. Alkire, Ted Agriculture Lindsay Allen, George Eingineering Sulphur Allen, Vera Home Economics Randlett Armstrong, Ola Home Economics Chandler Armstrong, Chas Agriculture Ringwood Barr, Robert Engineering Stillwater Beard, Fred J Agriculture Snyder Begley, Bryan Engineering Frederick Bellis, Chas Agriculture Stillwater Bever, Hazel Home Economics Skedee Biggin Maybelle Home Economics Stillwater Engineering ...... Stillwater Bever, Hazel M. Home Economics Skedee Biggin, Maybelle Home Economics Stillwater Bilyeu, Floyd Commerce and Marketing Mulhall Bishop, Dean Commerce and Marketing Stillwater Blazier, Warren Engineering Lawton Boggs, Logan Agriculture Chandler Bonar, Fred Agriculture Lovell Boone, Velma Home Economics Hardy Boone, Lawrence D Agriculture Hardy Bosserman, Ruth Home Economics Minneapolis, Minn. Bottger, Earle Agriculture Oklahoma City Bowles, Harry Engineering Marksville, La Boydston, Roy G Agriculture Elk City Braly, Byron B Agriculture Leonard, Texas Brattain, Wm. Engineering Capron Brenninger, Esther Education Orlando Brower, Belle Home Economics Luther Brown, Maurice Y Agriculture Agra Bryan, Kenneth Agriculture Stillwater Bulling, Marie Commerce and Marketing Orlando Bullen, Lynn H. Commerce and Marketing Anadarko Bunyard, Claude L Agriculture Tyrone Burnham, Alice Home Economics Stillwater Caldwell, Lanore Home Economics Stillwater Caldwell, Nita Home Economics Stillwater Caldwell, Eugene Agriculture Brownwood, Texas Caldwell, Nita Home Economics Stillwater Caldwell, Eugene Agriculture Brownwood Calloway, S. C. Agriculture Duncan Canfield, Ralph W Science and Literature Yale Cantwell, Carolyn Science and Literature Stillwater Carlson, Alice Home Economics Meno Carlton, Oscar Commerce and Marketing McLoud Carlyle, Helen F Agriculture Stillwater Carter, Zaida Education Stillwater Carter, Zaida Education Stillwater Cass, Maude Home Economics Sperry Castile, Eric Agriculture Stillwater Chase, M. W Agriculture Ralston Childs, Arthur B Education Pocasset Clausen, Chester A Agriculture Stillwater Clausen, Chester A Agriculture Stillwater Clausen, Lillian I Education Stillwater Clump, Thomas D Agriculture Stillwater Cloupe, Thomas D Agriculture Dover Coffman, J. B. Commerce and Marketing Hugo Colbert, Richard Commerce and Marketing Ada Conner, John H Agriculture Stillwater Coppedge, Wm Agriculture Scillwater Scopedge, Wm Science and Literature Grove Correll, Lawrence E Agriculture Stillwater Stillwater Courtney, Mahlon C Engineering Edmond Crane, Chester Engineering Arapaho Cummins, Ina Education Stillwater Curtis, Bonnie Education Uncas

# OKLAHOMA A. & M. COLLEGE

Darlow, Albert E	Agriculture Education Architecture Education Engineering Veterinary Medicine Engineering Home Economics Home Economics Home Economics Home Economics Home Economics	Stillwater
Davidson Lois	Education	Stillwater
Davidson, Lors	Architecture	Shawnee
Davis, Joe 1	Plantin	Stillwater
DeBord, Grace	Education	Sumwater
Dill Glenn	Engineering	Okemah
Donnally Louis	Veterinary Medicine	Elk City
Donnelly, Louis	Enginearing	Keifer
Dose, Herman	Eligineering	Caillanatan
Doty, Lucille	Home Economics	Stillwater
Downing Grace	Home Economics	Stillwater
Dunlan Marguerita	Home Economics	Bartlesville
Duniap, Marguerite	TT December	Chillmaton
Dye, Jessie	Home Economics	Stillwater
Filing Tames Wm	Science and Literature	Mountain View
Ellia I coton	Engineering	Shawnee
Ellis, Lester	Science and Literature	Caillanatan
Elwell, Rex	Agriculture	Stillwater
Evans, Gail K	Engineering	Randlett
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Fennema, Pete	Agriculture	CI
Fibus, Arthur	Engineering	Snawnee
Fisher Teague	Agriculture	Clinton
Folle John P	Fraineering	Lawton
Polk, John D.	A	Chuntford
Forrester, H. E	Agriculture	Stratiord
Forrester, W. B	Agriculture Engineering Agriculture Engineering Agriculture Agriculture Agriculture Home Economics Agriculture Agriculture Agriculture	Strattord
Forrester Nellie	Home Economics	Stratford
Forton D Turnor	A minultura	Kenton Tenn
Fowler, P. Turney	Agriculture	Kenton, Tenn.
Frier, Goul	Agriculture	Sulphur
Gallagher Clifford	Veterinary Medicine	Stillwater
Ganagher, Chillord	Veterinary Medicine Education Agriculture Science and Literature Home Economics Agriculture Home Economics Agriculture Engineering	May
Garrett, Lillian	.Education	Mickenzie, Tenn
Georgia, Roy	Agriculture	. Ripley
Germany Chae	Science and Literature	Heavener
Citties 137	II F	Chandles
Gilliam, Winnie	.Home Economics	Chandler
Godfrey, Samuel	Agriculture	. Winnfield, La.
Goold, Christine	Home Economics	. Glencoe
Green F Bustic	Agricultura	Cestos
Green, E. Burus	Agriculture	Cestos
Green, Lee W	.Engineering	. Guymon
	0 126 1	To 11
Hacker, Albert	.Commerce and Marketing	Purcell
Hall, Georgia	.Home Economics	. Stillwater
Wam Too	Engineering	Dioleina Torras
Ham, Joe	Engineering	Dickins, Texas
Ham, Joe	Engineering	Dickins, Texas Braymer, Mo.
Ham, Joe	Engineering	. Dickins, Texas . Braymer, Mo. . Stillwater
Ham, Joe	Engineering Home Economics Engineering Home Fconomics	Dickins, Texas Braymer, Mo. Stillwater
Ham, Joe	Engineering Home Economics Engineering Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater
Ham, Joe	Engineering Home Economics Engineering Home Economics Agriculture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione	Engineering Home Economics Engineering Home Economics Agriculture Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde	Engineering Home Economics Engineering Home Economics Agriculture Agriculture Agriculture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas	Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B.	Engineering Home Economics Engineering Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G.	Engineering Home Economics Engineering Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Education	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Ouay
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G.	Engineering Home Economics Engineering Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Education Economics Agriculture Education	Dickins, Texas. Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Ouay
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Ouay Purcell
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope	Engineering Home Economics Engineering Home Economics Agriculture Agriculture Agriculture Agriculture Cagriculture Agriculture Agriculture Education Commerce and Marketing Home Economics	Dickins, Texas. Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Ouay Purcell Stillwater Gage
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering	Dickins, Texas. Braymer, Mo. Stillwater Oklahoma City Stillwater Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessay
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Ouay Purcell Stillwater Gage Hennessey
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce Education Home Economics Commerce and Marketing Engineering Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W.	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hesser, Wynes W.	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Education Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hesser, Wynes W. Hesser, Isaac Hetherington Craed	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Home Economics Engineering Engineering Engineering Science and Literature	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hesser, Wynes Hesser, Isaac Hetherington, Creed	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatton, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hesser, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A.	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Education Commerce and Marketing Engineering Engineering Engineering Engineering Engineering Engineering Engineering Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatten, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hesser, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg Ralph	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Engineering Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Education Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Agriculture Commerce and Marketing Engineering Science and Literature Engineering Agriculture Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Morrison Saltfork Snyder Elk City
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatten, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Heild, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm. S.	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Engineering Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Commerce and Marketing Engineering Comerce and Marketing Engineering Comerce and Marketing Engineering Commerce and Marketing Engineering Commerce and Marketing Agriculture Agriculture Commerce and Marketing Architecture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Education Commerce and Marketing Engineering Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing Engineering Commerce and Marketing Engineering Active Commerce Agriculture Agriculture Commerce and Marketing Agriculture Agriculture Commerce and Marketing Architecture Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Stillwater Stillwater Enid Stillwater Gage Hennessey Stillwater Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatten, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Heild, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm. Hogle, Ellen Hoke. Jesse	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Engineering Engineering Home Economics Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing Engineering Comerce and Marketing Engineering Comerce and Literature Engineering Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Kaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing Engineering Commerce and Marketing Engineering Active Commerce Commerce and Marketing Agriculture Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harpe, Iuna Harpe, Iuna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes Hester, Wynes Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Education Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Agriculture Commerce and Marketing Engineering Commerce and Marketing Engineering Commerce and Marketing Agriculture Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing Architecture Home Economics Commerce and Marketing	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Ioy Hester, Wynes W. Hesser, Kaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing Engineering Commerce and Marketing Engineering Commerce and Marketing Engineering Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing Home Economics Commerce and Marketing Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Ouay Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harpe, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes Hester, Wynes Hester, Kaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houstou, Henry, M	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Education Commerce and Marketing Engineering Home Economics Engineering Engineering Engineering Engineering Agriculture Engineering Agriculture Engineering Agriculture Engineering Agriculture Commerce and Marketing Engineering Agriculture Engineering Agriculture Engineering Agriculture Commerce and Marketing Home Economics Commerce and Marketing Home Economics Architecture Architecture Architecture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Stillwater Stillwater Expectation Saltfork Snyder Elk City Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Ioy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman Deicie	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing Engineering Commerce and Marketing Engineering Commerce and Marketing Engineering Commerce and Marketing Engineering Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing Architecture	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Ouay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Ouay Stillwater Calumet Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Education Commerce and Marketing Engineering Home Economics Engineering Engineering Engineering Agriculture Engineering Agriculture Engineering Agriculture Engineering Agriculture Engineering Agriculture Commerce and Marketing Engineering Agriculture Engineering Agriculture Engineering Agriculture Commerce and Marketing Home Economics Commerce and Marketing Home Economics Architecture Architecture Architecture Home Economics Architecture Home Economics Architecture Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Stillwater Stillwater Extillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Ioy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M. Huffman, Daisie Hull, Edward	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Agriculture Commerce and Marketing Engineering Commerce and Marketing Engineering Commerce and Marketing Engineering Agriculture Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing Architecture Home Economics Economics Architecture Architecture Architecture Architecture Home Economics Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Ouay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Ouay Stillwater Calumet Stroud Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm. S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M. Huffman, Daisie Hull, Edward	Engineering Home Economics Engineering Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Engineering Engineering Economics Engineering Agriculture Economics Engineering Agriculture Engineering Agriculture Commerce and Marketing Engineering Agriculture Commerce and Marketing Engineering Agriculture Agriculture Commerce and Marketing Architecture Home Economics Architecture Architecture Architecture Architecture Architecture Architecture Architecture Economics Architecture Architecture Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Calumet Stillwater Ouay Stillwater Ouay Stillwater Stillwater Ouay Stillwater Calumet Stratford Winnfield, La. Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatton, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm. S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M. Huffman, Daisie Hull, Edward	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Architecture Home Economics Commerce and Marketing Architecture Home Economics Economics Economics Economics Economics Economics Engineering Home Economics Economics Economics Economics Engineering Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Ouay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Ouay Stillwater Clumet Stratford Winnfield, La. Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harpe, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph Hinkel, Wm. S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman, Daisie Hull, Edward  Ikard, Harrison Leach, Herrison	Engineering  Commerce and Marketing  Home Economics Engineering Home Economics Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Education Commerce and Marketing Home Economics Commerce and Marketing Engineering Home Economics Engineering Engineering Agriculture Agriculture Home Economics Commerce and Marketing Architecture Home Economics Architecture Home Economics Architecture Home Economics Architecture Home Economics Engineering  Architecture Home Economics Engineering  Engineering  Veterinary Medicine	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Stillwater Stillwater LEk City Stillwater Stillwater Stillwater Ouay Stillwater Calumet Stratford Winnfield, La. Stillwater Chickasha
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm. S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman, Daisie Hull, Edward Ikard, Harrison Isenberg, G. W.	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Education Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Agriculture Engineering Agriculture Engineering Commerce and Marketing Home Economics Engineering Commerce and Marketing Engineering Agriculture Engineering Agriculture Agriculture Commerce and Marketing Architecture Home Economics Engineering Home Economics Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Calumet Stillwater Calumet Stratford Winnfield, La. Stillwater Wornfield, La.
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman, Daisie Hull, Edward  Ikard, Harrison Isenberg, G. W. Isenberg, Olieva	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Education Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Commerce and Marketing Engineering Active Commerce Engineering Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing Architecture Home Economics Engineering Architecture Engineering Architecture Engineering Architecture Engineering  Veterinary Medicine Engineering Home Economics Engineering  Veterinary Medicine Engineering Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Ouay Stillwater Stroud Stillwater Elk City Stillwater Ouay Stillwater Ouay Stillwater Calumet Stratford Stillwater Ouay Stillwater Calumet Stratford Stillwater Calumet Stratford Winnfield, La. Stillwater Chickasha Devol Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harpe, Juna Harpe, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes Hester, Kasa Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman, Daisie Hull, Edward Ikard, Harrison Isenberg, G. W. Isenberg, Olieva Isenberg, Verna	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Education Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Agriculture Engineering Agriculture Engineering Agriculture Commerce and Marketing Engineering Agriculture Engineering Agriculture Commerce and Marketing Agriculture Engineering Agriculture Commerce and Marketing Architecture Home Economics Engineering Home Economics Engineering Weterinary Medicine Engineering  Veterinary Medicine Engineering Home Economics Engineering Home Economics Engineering  Veterinary Medicine Engineering Home Economics	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Calumet Strillwater Calumet Stratford Winnfield, La. Stillwater Devol Stillwater Devol Stillwater Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harpe, Juna Harper, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman, Daisie Hull, Edward  Ikard, Harrison Isenberg, G. W. Isenberg, Olieva Isenberg, Verna Ives	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Commerce and Marketing Home Economics Commerce and Marketing Engineering Engineering Science and Literature Engineering Agriculture Commerce and Marketing Engineering Active Commerce Engineering Agriculture Commerce and Marketing Architecture Home Economics Commerce and Marketing Architecture Home Economics Engineering Architecture Engineering Architecture Engineering Architecture Engineering  Veterinary Medicine Engineering  Veterinary Medicine Engineering Home Economics Science and Literature Science and Literature	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Ouay Stillwater Ouay Stillwater Stratford Stillwater Ouay Stillwater Ouay Stillwater
Ham, Joe Hanna, O'Lulu Harp, Norris Harp, Juna Harpe, Juna Harpe, Roy Hartenbower, Ione Haston, Clyde Hatch, Thomas Hays, R. B. Hauser, E. G. Head, Herbert Held, Hope Hennin, Hugh Henry, Jack Hertzler, Joy Hester, Wynes W. Hesser, Isaac Hetherington, Creed Heusel, Chas A. Hickman, George Hilgenberg, Ralph Hinkel, Wm, S. Hogle, Ellen Hoke, Jesse Holmes, Neta Hostetter, J. Eston Houston, Henry M Huffman, Daisie Hull, Edward Ikard, Harrison Isenberg, G. W. Isenberg, Olieva Isenberg, Verna Ives, Herbert	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Education Commerce and Marketing Engineering Home Economics Engineering Agriculture Engineering Engineering Agriculture Engineering Agriculture Engineering Agriculture Engineering Agriculture Engineering Agriculture Engineering Engineering Agriculture Engineering Home Economics Engineering Engineering Engineering Architecture Home Economics Engineering Home Economics Ergineering Home Economics Engineering	Dickins, Texas Braymer, Mo. Stillwater Stillwater Oklahoma City Stillwater Enid Glencoe Quay Purcell Stillwater Gage Hennessey Aline Stroud Stillwater Morrison Saltfork Snyder Elk City Stillwater Stillwater Calumet Stillwater Calumet Stratford Winnfield, La. Stillwater Devol Stillwater Devol Stillwater Stillwater Chickasha Devol Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater
Isenberg, G. W	Home EconomicsScience and LiteratureScience and Literature	Devol Stillwater Stillwater Avery
Isenberg, G. W	Home EconomicsScience and LiteratureScience and Literature	Devol Stillwater Stillwater Avery
Isenberg, G. W	Home EconomicsScience and LiteratureScience and Literature	Devol Stillwater Stillwater Avery
Isenberg, G. W	Engineering Home Economics Engineering Home Economics Agriculture Home Economics Agriculture Agriculture Agriculture Agriculture Agriculture Agriculture Education Commerce and Marketing Home Economics Engineering Engineering Science and Literature Engineering Agriculture Agriculture Engineering Science and Marketing Engineering Agriculture Commerce and Marketing Engineering Agriculture Engineering Architecture Home Economics Engineering  Veterinary Medicine Engineering Home Economics Engineering  Veterinary Medicine Engineering  Commerce and Literature Ecience and Literature Commerce and Marketing Commerce and Marketing Commerce and Marketing	Devol Stillwater Stillwater Avery

Johnson, Pearl F	Home Economics Commerce and Marketing Home Economics Commerce and Marketing Home Economics Agriculture	Stillwater
Johnson, C. R	Commerce and Marketing	Lawton
Jones, Goldia	Home Economics	., Stillwater
Jones, Cecil G	Commerce and Marketing	Stillwater
Jones, Helen	Home Economics	Welch
Joseph, Othal K	Agriculture	. Doxey
Valles Hamild F	Engineering Engineering Commerce and Marketing Commerce and Marketing Home Economics Education Agriculture Agriculture Veterinary Medicine	Damanant
Keller, Harold E	Fngineering	Muskogee
Kemp Harvey	Commerce and Marketing	Guthrie
Kerr I. R	Commerce and Marketing	Pauls Valley
Kilpatrick, Maude	Home Economics	Hunter
Kisselburg, Carl	Education	Marietta
Knight, Eugene	Agriculture	Stillwater
Krisher, Sherman	Agriculture	Walters
Kutis, Frank	Veterinary Medicine	.Edmond
Lahr, Herbert	Agriculture	Waynoka
Larner, Ray A	.Engineering	. Dill
Laughlin, Mary	Home Economics	. Stillwater
Lavaggi, Eugene	Agriculture	Hoboken, N. J.
Leach, Florence	Education	Stillwater
Lewis, Jaye	Agriculture	Ponca City
Lewis, Inez	Education	. Ponca City
Long, Leona	Agriculture Engineering Home Economics Agriculture Education Agriculture Home Economics	Stillwater
McCarrel Mrs. Virgia	Home Economics	Stillwater
McKinnon, John I	Architecture	Eddy
McNeil, Sidney	ArchitectureEngineering	Altus
	Engineering  Engineering  Commerce and Marketing  Education  Home Economics  Agriculture  Commerce and Marketing  Agriculture  Home Economics  Agriculture  Home Economics  Engineering  Engineering  Education  Home Economics  Agriculture  Agriculture  Home Economics  Agriculture  Home Economics  Agriculture  Home Economics  Agriculture  Home Economics  Science and Literature  Veterinary Medicine  Agriculture  Home Economics  Science and Literature  Pergineering  Engineering  Engineering  Engineering  Engineering  Agriculture	
McVay Warren	Engineering	Ingersoll
Madigan Gladye	Commerce and Marketing	Ardmore
Marble Mable	Education	Stillwater
Markwell Rachel	Home Economics	Stillwater
Markwell Earl	Agriculture	Stillwater
Martin, Esther L	Home Economics	Stillwater
Marsh, Wm. S	.Agriculture	Kingfisher
Mathis, J. Paul	Commerce and Marketing	Wister
Mayberry, Fred	Agriculture	Claremore
Melton, Florence	Home Economics	Afton
Meredith, J. B	Engineering	Claremore
Miller, Wm. H	Engineering	Shawnee
Miller, Ruth	Education	Perkins
Mitchell, Lulu	Home Economics	Stillwater
Mittendorf, Oscar	Agriculture	Calumet
Morgan, Mary	Home Economics	Glencoe
Moore, Chas	Votering Wedicing	Waukomis Stillmotor
Morgan, Leonard	Agriculture	Carbon
Morrison Willie W	Agriculture	Stillwater
Mocely Mossie	Home Economics	Stillwater
Munyon Clyde	Science and Literature	Morrison
Murrah Ernest D	Engineering	Lyman Miss
Murray, James P.	Engineering	Manitou
Myatt. William	Agriculture	Yale
Nelson Billie R	Agriculture	Stillwater
Nime Albert K	Agriculture	Cushing
Oder, Hesper	.Home Economics	Arcadia
Oldham, Lola	Home Economics	Stillwater
Oliver, Hugh	Home Economics Home Economics Engineering Home Economics Education	Guthrie
Outhier, Virgil	Home Economics	Homestead
Owsley, Byrla	.Education	Stillwater
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Patterson, Elliott	Commerce and Marketing	Carll
Patterson, Elliott	Commerce and Marketing	Stillwater
Patterson, Elliott	Commerce and Marketing	Stillwater Cushing
Patterson, Elliott	Commerce and Marketing Home Economics Commerce and Marketing Agriculture	Stillwater Cushing Glencoe
Patterson, Elliott Patton, Pearl Peerry, J. Burley Penny, James H. Percival, Chas.	Commerce and Marketing	Stillwater Cushing Glencoe Bay City, Texas
Patterson, Elliott Patton, Pearl Peerry, J. Burley Penny, James H. Percival, Chas. Percival, Kathryn	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics	Stillwater Cushing Glencoe Bay City, Texas Bay City, Texas
Patterson, Elliott Patton, Pearl Peery, J. Burley Penny, James H. Percival, Chas. Percival, Kathryn Pierson, Marie	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics Education Engineering	Stillwater Cushing Glencoe Bay City, Texas Bay City, Texas Pond Creek
Patterson, Elliott Patton, Pearl Peerry, J. Burley Penny, James H Percival, Chas. Percival, Kathryn Pierson, Marie Pierson, Roy Postelle Cuy	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics Education Engineering Agriculture	Stillwater Cushing Glencoe Bay City, Texas Bay City, Texas Pond Creek Pond Creek Pond Creek
Patterson, Elliott Patton, Pearl Peerry, J. Burley Penny, James H. Percival, Chas. Percival, Kathryn Pierson, Marie Pierson, Roy Postelle, Guy Potter, Cecil	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics Education Engineering Agriculture Commerce and Marketing	Stillwater Cushing Glencoe Bay City, Texas Bay City, Texas Pond Creek Pond Creek Oklahoma City Stillwater
Patterson, Elliott Patton, Pearl Peery, J. Burley Penny, James H. Percival, Chas. Percival, Kathryn Pierson, Marie Pierson, Roy Postelle, Guy Potter, Cecil	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics Education Engineering Agriculture Commerce and Marketing Home Economics	Oktaban Stillwater Cushing Glencoe Bay City, Texas Bay City, Texas Pond Creek Oklahoma City Stillwater Stillwater
Patterson, Elliott Patton, Pearl Peerry, J. Burley Penny, James H Percival, Chas Percival, Kathryn Pierson, Marie Pierson, Roy Postelle, Guy Potter, Cecil Potter, Hulda Powell Bessic	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics Education Engineering Agriculture Commerce and Marketing Home Economics Legineering Commerce and Marketing Home Economics	Oktahan Cushing Glencoe Bay City, Texas Bay City, Texas Pond Creek Pond Creek Oklaboma City Stillwater Stillwater
Patterson, Elliott Patton, Pearl Peerry, J. Burley Penny, James H. Percival, Chas. Percival, Kathryn Pierson, Marie Pierson, Roy Postelle, Guy Potter, Cecil Potter, Hulda Powell, Bessie Powell, Frank W.	Commerce and Marketing Home Economics Commerce and Marketing Agriculture Engineering Home Economics Education Engineering Agriculture Commerce and Marketing Home Economics Home Economics Agriculture	Oktahan Cushing Glencoe Bay City, Texas Bay City, Texas Pond Creek Pond Creek Oklahoma City Stillwater Stillwater Stillwater Stillwater

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Pratt, Willard	Agriculture Education Home Economics Agriculture	Drummond
Prowant, Lucy	Education	Stillwater
Putman, Ora	Home Economics	Gould
Putman, O. L	Agriculture	Woodford
2		
Rahon, Illawynne	Home Economics	Stigler
Ranshottom, Earl A	Agriculture	Coldwater. Ohio
Pasmussen Arnold	Engineering	Hennessey
Pasmussen Orrill	Engineering	Hennessey
Rasmussen, Orini	Agricultura	Norman
Reed, Ous	Cairnes and Literature	Manuscin Vien
Reynolds, Cleo	Science and Literature	Mountain view
Richardson, Blanche	Home Economics	Stillwater
Reichman, Carl	Agriculture	Stillwater
Roberts, Hazel	Home Economics	Welch
Robertson, Reuben	Agriculture	Stillwater
Robinson, Chas. I.	Commerce and Marketing	Muskogee
Rockett Louis	Engineering	Ardmore
Porara Raccia	Education	Stillwater
Degers, Dessie	Home Foonamies	Enid
Rogers, Esther	Trans Francisco	Chan Han
Roope, Kuth		Chandler
Rosenbaum, William	Agriculture	New York City, N.
Rouse, Claude	Commerce and Marketing	Pleasant Valley
Russell, Joe	Engineering	Ballard
	Home Economics Agriculture Engineering Engineering Agriculture Science and Literature Home Economics Agriculture Home Economics Agriculture Home Economics Agriculture Home Economics Agriculture Commerce and Marketing Engineering Education Home Economics Home Economics Agriculture Commerce and Marketing Engineering Education Home Economics Home Economics Home Economics Agriculture Commerce and Marketing Engineering	
Cala Clauda	Architecture	Shawnee
Sale, Claude	Agriculture	Altera
Schnofrenberg, Forrest B	Marie Marie	., Aitus
Schooler, George	veterinary Medicine	. Giencoe
Scott, Christian	Education	Meno
Scott, Frances	Science and Literature	Strong City
Scroggs, Wm. A	Commerce and Marketing	Stillwater
Scroggs, Ada M.	Education	Stillwater
Sewell Philip	Agriculture	Stillwater
Sharbarra John	Education	Stillwater
Chi-14e Wes	Commones and Marketing	Columna
Shields, Will	To in the state of	Calumet
Shirley, Emory	Engineering	Gage
Shively, Hazel	Education	Stillwater
Sieglinger, Leona	Education	Lone Wolf
Sitter, Riley	Engineering	Blackwell
Skinner, Ray F	Agriculture	Billings
Skinner E. Ray	Education	Stillwater
Smith Willia C	Agriculture	Omega
Smith Walton	Education	Vici
Smith, Walter	Education	V ICI
Smith, W. J. Bryan	Education	Lakemp
Smith, Leila	Education	Ripley
Smith, Edward P	Agriculture	Little
Smith, Arthur Lee	Commerce and Marketing	Edmond
Soule, Clayton	Engineering	Nowata
Spangler, Mace	Education	Frederick
Squire, Lelah	Home Economics	Stillwater
Stanley Revon	Agricultura	Wieter
Standburg Flore	Education	Calliana Ann
Cham End	Commone and Marketine	Still water
Stall, Fred		Wagnolia, Ark.
Steward, Mrs. Una V		Anadarko
Steward, Eunice	rome Economics	Anadarko
Stokesberry, Lawrence	Agriculture	)Stillwater
Stone, Shelley R	Engineering	Chickasha
Stringer, Walter	Commerce and Marketing	Ochelata
Swalley, Lucy	Home Economics	Newkirk
Swim, Paul	Engineering  Architecture Agriculture Veterinary Medicine Education Science and Literature Commerce and Marketing Education Agriculture Education Commerce and Marketing Engineering Education Engineering Agriculture Education Agriculture Education Agriculture Education Agriculture Education Agriculture Education Education Agriculture Education Education Education Commerce and Marketing Engineering Engineering Engineering Engineering Engineering Engineering Education Home Economics Agriculture Education Education Home Economics Agriculture Education Commerce and Marketing Home Economics Engineering  Agriculture Education Education	Stillwater
	Agriculture	- Jan Hutel
Taylor, Lisle	Agriculture	Chandler
Terry Lee R	Education	Clama
Thomas Fibert F	Commerce and Marlatina	Damas T
Thomas Harley	A considered and Marketing	rampa, Texas
Thomas, Harley U	griculture	Stillwater
Inomas, Estner	Economics	Vinita
Inompson, Millard G	Engineering	Jefferson
Tilton, Richard T	Agriculture	Nardin
Tilton, George A	Agriculture	Nardin
Titus, Chas.	Home Economics	Ingersoll
Tolleson, John W	Commerce and Marketing	Stillwater
Trekell Lester	Agriculture	Transmitter
Tucker Chas	Commerce and Manager	Caille
Luchel, Chas	commerce and marketing	Stillwater
Vollmer Hard	A1-*44	2.111
voilmer. Hazel	Architecture	Stillwater
		•
Walker, Morgan	Engineering Agriculture Education	Fleetwood
Wallace, Gerald A	Agriculture	Stillwater
Watkins, Drew	Education	Canute
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Watson Glenn	Engineering	Stillwater	
Welch Wm D	Commerce and Marketing	Albion	
Wasses Takes	Commerce and Marketing	E	
Whales Deed	Commerce and Marketing	C4:114	
wheeler, Feari	Home Economics	Stillwater	
	Education		
Whipple, John W	Education	Stillwater	
	Commerce and Marketing		
White, Bob	Agriculture	Vinita	
White, Oscar	Commerce and Marketing	Sulphur	
Whitford, Thomas N	Engineering	Stillwater	
Wiley, Ross L.	Agriculture	Perkins	
	Science and Literature		
	Commerce and Marketing		
Wilson Wilher	Commerce and Marketing	Blockwall	
	Commerce and Marketing		
Wilson, David	Commerce and Marketing	Shawnee	æ
wood, Sally	Home Economics	Hillsboro,	Texas
	Commerce and Marketing .		
	Agriculture		
Wright, Floyd H	Architecture	Carmen	
Young, Verle	EducationEducation	Stillwater	
Young, Ione	Education	Stillwater	
Zeare Chae R	Agriculture	Oklahoma	City
Lears, Chas. Il	signound	Okianoma	City

#### Secondary School

Abercrombie, Hugh, Cashion Adair, Fred, Pryor Aikins, Grace Fay, Stillwater Allen, Calvin, Trail

Baker, J. Oral, Perkins
Ball, Frank, Yukon
Barnes, Norris, Oklahoma City
Barney, Mamie, Stillwater
Barth, Christine, Perkins
Barth, Jennie, Perkins
Barth, Jennie, Perkins
Bartholomew, Beatrix, Stillwater
Bauman, Anna, Bessie
Beach, Osa, Checotah
Bean, Mrs. Mable, Stillwater
Bentley, Louise, Stillwater
Berkland, Pierre C., Vinita
Biberdorf, Gustav, Orlando
Biggin, Lyle, Stillwater
Bishop, Lester, Stillwater
Black, Tom Allen, Pauls Valley
Boerner, Carl, Sparks
Bomark, Edna, Pawnee

Cagle, P. Leon, Dewey
Calame, Carroll, Stillwater
Calame, Arthur, Stillwater
Canfield, Ray, Yale
Canode, Walter, Owasso
Cantwell, Robert W., Stillwater
Capps, James, Banner
Caplena, Mable, Wynona
Carlton, Everett, McLoud
Cermak, Lizzie, Red Rock
Chapman, Dewey J., Billings
Chase, Lillian, Supply
Chase, Ada E., Supply
Cheek, Leonard, Sallisaw
Choate, Corneal, Paoli
Clausen, Minnie, Stillwater

Damon, Marion, Ringwood
Damon, Frank W., Ringwood
Damon, George M., Ringwood
Darr, A. J., Alva
Darr, Harry, Alva
Daugherty, Howard, Edmond
Davis, Arthur H., Enid
Deen, Will, Vinita

Anderson, J. Emery, Haileyville Atkinson, Roy, Stillwater Axtell, Elsie, Ripley Ayers, Ray R., Leedy

Bonham, Pearl, Rocky
Borah, John, Colbert
Bonar, Hallie, Lovell
Bonner, Albert, Stillwater
Boone, Temple, Hardy
Booth, W. J. B., Tipton
Boushee, Wm., McAlester
Boyd, Verne, Hooker
Boydston, Virgil, Elk City
Bronaugh, Marshall, Mounds
Brown, Myrtle, Ripley
Brown, Leslie, Guthrie
Brunskill, Don W., Elgin
Bryce, James F., Stillwater
Bunyard, D. I., Stillwater
Buryard, D. I., Stillwater
Burkett, Thelma, Panama
Burkhead, Leonard, Piedmont
Burnham, Zoe, Stillwater

Claymon, Milton, Cushing Clayton, Homer C., Dill City Clem, Harrison, Pawhuska Clingenpeel, Lillie, Stillwater Cloughley, Harmon, Ringling Cloyd, Joe, McAlester Coates, Soggie, Pryor Coe, Archibald, E., McAlester Coates, Abija, Ada Cole, James B., Tulsa Conarro, Gladys, Stillwater Corn, Marjorie, Muskogee Cowan, John B., Eddy Cox, J. Burl, Stilwell Curry, Katherina, Stillwater

Dickinson, Wm. Calvin, Prague Dickerson, Leo E., Wayne Dillman, Effie, Glencoe Dolphin, Philip, Tuskahoma Dudek, Millie, Willow Dutcher, Carrie, Stillwater Dycke, Leonard, Marshall Eaton, Donald, Pemeta Edmaston, Alvin, Hollis Edwards, Marshall, Asher

Fair, Jessie, Idabel Fairchild, Louella, Morrison Farmer, Arthur, Colony Files, James, Ralston Fisher, Mary, Stillwater Fisher, Golda, Yale

Gage, W. Frank, Atoka George, Faber, Ravia

Hahn, Lester, Hunter
Hanna, Lester, Braymer, Missouri
Harnden, Lemuel, Stillwater
Harmon, John, Garber
Harnden, Minnie, Stillwater
Harrison, Robert B., Kenefic
Harrison, Roy F., Davenport
Hassen, F. N., Sulphur
Haston, Dewey, Stillwater
Heady, Clay, Noxie.
Henderson, De Witt, Tribbey
Henderson, Robert E., Tribbey
Henderson, Ora, Tribbey
Henderson, Myron, Yale

Jacks, Carroll, Stillwater Jackson, R. E., Coweta Jacob, Walter, Stillwater Jacobs, Caton, Stillwater

Kane, Cora, Stillwater Kitchell, Edward, Haileyville Krivahlavek, George, Garber Kuhlmeyer, Leslie, Hunter LaBohn, Henry, Oklahoma City Langan, Beatrice, Drumright

McCroskey, Orlo, Quay McCroskey, Francenah, Quay McCoy, Emma, Garber McGee, Maxie, Oklahoma City

Main, Francis, Stillwater Marcia, Glenn, Sayre Marlett, Abba, Newby Martin, Leroy, Stillwater Martin, Frank, Sallisaw Mauch, Dora, Chandler May, Roy D., Scullin

Nation, John, Quinton Nault, Joe, Okeene Neaves, Eunice, Tryon

O'Keefe, Lucy, Yale Olmstead, Ivan W., Marshall

Park, H. Clay, Stillwater Parker, Grace, Glencoe Parker, Evelyn, Glencoe Parman, Vera, Stillwater Parry, Wm., Mill Creek Paul, Henry D., Cushing

Rader, Sarah, Glencoe Ragland, Raymond, El Reno Ramsey, Geneva, Cushing Ramsey, Fay, Cushing Rapp, Miriam, Stillwater Rasmussen, Sylvia, Hayward Rasmussen, Jerd, Hayward Ratzloff, Rudolph, Meno Ray, Gertrude, Stillwater Ray, Marion, Stillwater Emmons, Warren, Vinita England, Chas., Durant Etheridge, Ernest, Cold Springs

Ford, Bland, Monroe Friedemann, Otto, Stillwater Friedemann, Paul, Orlando Frisbie, Arthur, Guthrie Fullerton, Floyd H., Crider, Missouri Futoransky, Henry, Haileyville

Goe, Edith Hayward Grant, Malvina, Terlton

Hendrickson, Asher, Boynton Herrick, Wm. B., Sayre Hill, Lawrence, Hill Holder, Mary, Stillwater Housh, Cecil N., Stillwater Howe, Allen, Orlando Hower, Worth, Haileyville Hughett, Merl, Stillwater Hughes, Willie, Ames Hughes, Dee, Ames Hughes, Vivian, Milburn Hughes, Grace, Stillwater Hutcheson, Bessie, Stillwater

Johnson, Fern, Orlando Jones, Margarett, Lawton Jones, C. Ray, Yale

Lewis, Alta, Ponca City Littlefield, J. W., Braden Long, Blanche, Coweta Loosen, Ernest, Okarche Lowrance, Chas. O., Sulphur

McKinnon, Chas., Glencoe McLain, Ethel, Muskogee McLaughlin, G. W., Kansas City, Missouri

Means, Vernon, Stillwater Means, Emory, Stillwater Mitchell, Homer R., Leedey Moore, Horatio, Nowata Morrison, Jesse, Noble Munsell, Melba, Stillwater Myers, Muriel, Cushing

Nelson, Edwin, Ames Nelson, I. G., Stillwater Norman, C. W., Wagoner

Outhier, Douglas, Homestead

Pearson, Helen, Pond Creek Pinson, John J., Skiatook Pitzer, Florence, Stillwater Porter, Wm. A. Leonard Postelle, Ruth, Oklahoma City Putman, Carl, Gould

Ray, Wilbur, Stillwater
Rea, Josie, Buffalo
Reid, Lynn, Stillwater
Rey, Walter, Oklahoma City
Reynolds, Gladys, Elk City
Rich, Floyd, Hayward
Roberts, Walter, McLoud
Robinson, Geo. L., Pauls Valley
Robinson, Ray, Cushing
Roberts, Walter, McLoud

Roberts, Estella, Stillwater Rusher, Harold, Yale Rusher, Helen, Yale

Searcy, Carl, Yale
Sewell, Raymond, Stillwater
Shapiro, Anna, Cushing
Sherrard, Lois, Orlando
Simmons, Marie, Stillwater
Simmons, Cloyd, Sayre
Sims, Vera, Idabel
Smith, Paul C., Nash
Smith, Leo, Lockridge
Snyder, Ivan, Hayward
Soule, Field, Beggs
Spangler, Irl, Drumright
Sparling, Cecil, Jennings

Tabor, Paul S., Stillwater Tankersley, Theo., Stillwater Taylor, Oscar, Stillwater Taylor, Nannie, Alfalfa Taylor, Arthur, Alfalfa Taylor, Clarence, Stroud Thomas, Junior, Talihina Thomas, Pinkney, Pauls Valley

Van Arsdell, Chas., Orlando Vermillion, Evelyn, Stillwater

Walalce, John, Oklahoma City
Walsh, Claude, Los Angeles, California
Warlick, Lester, Le Kemp
Weatherford, Curtis, Gilmore
Weaver, Walter, Stillwater
Wheeler, Blanche, Stillwater
Whillock, Clyde, Stillwater
Whisler, Jessie, Boynton
Whisler, John M., Boynton
White, Milford, Vinita

Yaley, Belle, Maramec Yeargin, Grace, Stillwater Russell, Charlie, Watts Rutter, Earl, Stillwater Ryan, Dana, Maramec

Spelman, Ellen, Glencoe
Stanley, Della, Stillwater
Stanton, Lettie, McAlester
Stephens, Hazel, Manvel, Texas
Stevens, Carl, Kenefic
Stewart, Theresa G., Stillwater
Stokesberry, Ruth, Stillwater
Strickland, Essa, Morrison
Sturgeon, LeRoy, Ames
Sturgis, Alden, Darlington
Stuteville, G. C., Alfalfa
Swindle, Frank, Rosedale

Thomas, Houston E., Stillwater Thomas, Lester C., Ahpeatone Thompson, Stella, Ralston Thompson, Beldon, Marlow Trenfield, Ray, Higgins, Texas Tripp, Thomas, Vinita Tucker, Pansy, Glencoe Turner, Herschell, Scottsville, Kentucky

Vermillion, Carrie, Stillwater Vinnedge, Lloyd, Oilton

Whitham, Blanche, Tryon Williams, Laveta, Yale Wilson, Theodore, Pauwhuska Wilson, Frank, Seminole Wilson, Grazella, Homestead Wilson, Maude, Catoosa Wilson, Hubert, Homestead Withers, Addie, Stillwater Woods, Roy, Randlett Wright, Eva, Tryon

Young, Bessie, Glencoe Young, James W., May

# Specials

Alexander, Leah, Okmulgee

Baines, Rita, Hennessey Beyer, Senora, Crescent

Chase, E. L., Ralston Chilcote, Pearl, Stillwater Chilcote, Maude, Stillwater

Downing, Robert E., Stillwater

Estes, Van E., Headrick

Forkner, Irl M., Oklahoma City

Goldenberg, Saul, Baltimore, Maryland

Harris, Ollie, Stillwater Hiet, Mrs. M. E., Stillwater

Jack, Eula, Stillwater Johnson, Eva, Doxey

Kenyon, Howard, Kaw City

Leahy, Tim, Pawhuska

McDowell, Amsa, Cherokee

Mahaffey, Nellie B., Devol Mahseet, Carl, Cyril Mason, George, Durant Blackwell, Treva, Stillwater

Clark, James W., Vinita Cook, Jake M., Fayetteville, Arkansas

Duncan, Donald, Dallas, Texas

Ewell, George W., Stillwater

French, Laura, Tyrone

Goldstein, Goldia, Oklahoma City

Hilgenberg, R. C., Elk City Holder, Mrs. Mary J., Stillwater

Juedeman, Hulda, Edna

Long, C. May, Cushing

McVay, Ruby, Paris, Arkansas

Moessner, W. E., Pocasset Moore, Helen G., Stillwater Newell, Rose, Stillwater Newton, Roy C., Stillwater

Penwell, Chas. M., Drumright

Rickard, E., Stillwater Robertson, Lola, Stillwater

Sasser, Bessie, Perkins Schooler, Bessie, Glencoe Schooler, Rachel, Glencoe Shepherd, Ruth, Stillwater

Taylor, Jatta, Stillwater Taylor, Mrs. A. P., Stillwater Thompson, Leo, Durant

Vaughan, Frank, Supply

Wallace, Mary, Stillwater Warehime, Forest, Ingersoll

Albert, Rose, Stillwater Andrews, Horace, Stillwater Arnold, Lenore, Chelsea

Baker, Stanley, Vici Ballenger, Elsie, Sulphur Barricklow, Clarence, Keokuk Falls Barthel, Hattie, Ralston Baskett, Ruth, Glencoe Bellamy, Constance, Stillwater Berry, Mattie, Stillwater Berryhill, Roby, Stillwater Bingham, Haskell, Minco

Canning, Stella, Stillwater Carden, David, Hastings Capps, Virgil, Okeene Cash, Murrill, Temple Chevront, Harlin, Jones Churchill, Edna, Guthrie Clary, Edgar, Chandler

Davie, Clyde, Rocky Denny, Walter M., Stillwater DeBord, Florence, Stillwater Dickson, Cecil, Hugo Donart, Julia, Stillwater

Earp, Ona, Stroud Eastwood, Carr, Boswell Elkins, Vinson, Randlett

Fanning, Bonnie, Stillwater Fowler, Leta, Tryon Francis, Annie, Fort Cobb

Glessner, Floyd, Kiel Germain, Mrs. Martha, Stillwater Gibson, Alvin L., Nashville, Arkansas

Hall, Frank, Ardmore
Hall, Wm. I., Stillwater
Ham, John, Dickins, Texas
Hamlin, W. E., Stillwater
Harris, Blanche, Stillwater
Hans, Anna, Stillwater
Harnden, M. D., Stillwater
Harrison, Jesse, Stillwater
Harshbarger, Wendell, Skedee

Irwin, W. L., Supply

Keys, Ona, Stillwater Kingham, Jasper, Sweetwater Nixon, Carl, Stillwater

Putney, Elmore, Oklahoma City

Rogers, Samuel A., Nashville, Arkansas Rule, Mrs. Orpha, Orlando

Smith, Lucy V., Cordell Studebaker, Rosa, Stillwater Swengel, Stanley, Wetumka

Todd, Virginia, El Reno Turner, Pearl, Scottsville, Kentucky Turner, J. W., Stillwater

West, Gerald W., Eufaula Whitenton, Mrs. Nellie, Stillwater

#### Business

Austin, Mrs. Katie, Stillwater Autrey, Hester, Washington

Boldman, Mildred, Walter Bortle, Fred, Claremore Brattin, Noble, Stillwater Breeckenridge, R. G., Kremlin Brown, Virgil, Buffalo Burdick, R. O., Haileyville Burnham, Ruth, Stillwater Burnham, S. J., Stillwater

Clausen, Ethel, Stillwater Conner, Walter L., Hobart Cotney, Viola, Stillwater Coulter, Ed C., Meno Cox, Gladys, Stillwater Coy, Henry, Yale Crain, Selma, Vinita

Doss, Carl D., Randlett Dulick, Marie, Stillwater Dupree, Carrie, Stillwater Dutcher, Mary, Stillwater

Ellis, Everett, Skiatook Elmore, Houston, Randlett

Francis, Myrtle, Fort Cobb Fyffe, Ira, Meno

Gordon, Isla, Stillwater Greene, F. Courtney, Stillwater

Higginbotham, Gordon, Brinkman Hoeffer, Cecil, Stillwater Hoeffer, Forrest, Stillwater Huff, Robert, Stillwater Huff, Elmer L., Geary Hulbert, Ralph, Canadian Hull, Ray, Stillwater Hunt, Esther, Stillwater

Kirkhart, A. R., Stillwater

Langan, Gertrude, Drumright Lillard, Wm. H., Pawhuska Livergood, Thurman, Newkirk Leno, Grant, Dewey

McCoy, Maybelle, Stillwater McKinnon, Vere, McAlester

Mackenzie, Frances, Stillwater Macklin, Maude, Ripley Main, H. G., Stillwater Miller, Josephine, Tulsa

Nelson, Okey, Stillwater Newman, Leone, Belle Plain, Kansas Nickell, Eathel, Watonga

Olmstead, Clara, Ripley

Page, George, Randlett
Palmer, Fannie, Drumright
Pappenfus, Leo, Jennings
Patrick, Jeff, Geary
Patton, Ella, Stillwater
Patton, Nell, Stillwater
Patton, Ruth, Stillwater
Peck, Lela, Oilton

Randolph, J. D., Tulia, Texas Ray, Florence, Stillwater Rea, George R., Buffalo Rector, Roy P., Cashion Reid, F. E., Stillwater Reid, John R., Stillwater Rieger, Frank, Garber Reimer, Christine, Ponca City

Seay, Everett, White Eagle Sherburne, Wm. R., Stillwater Sheperd, Esther, Stillwater Smith, Lee R., Ponca Sity Stafford, Joe, Stillwater

Tarver, L. L., Stillwater Tarver, Paul C., McAlester Terrill, Beth, Stillwater

Vetick, Albina, Stillwater Wallen, Stuvie, Bernice Wallen, Cylde, Bernice Wallingford, Chas. A., Stillwater Warlick, R. Arthur, Milton Weber, Emma, Dewey

Zalabak, Wm., Kingfisher

Locks, Gladys, Stillwater Long, Louella, Stillwater Lyne, Thomas, Stillwater

McNeil, Clarence, Hartshorne McWilliams, Roy, Hitchcock

Morgan, Mrs. Hazel A., Stillwater Mondy, Chas., Stillwater Moore, George, Nowata Mullen, Proctor, Agra

Nix, John, Hobart Norman, Victor, Stillwater

Overstreet, Lucille, Stillwater

Pendley, Norman, Jones City Pickens, Everett, Carmen Pierce, Esther, Stillwater Pierce, Verna, Stillwater Plank, Norris, Bartlesville Poffenberger, Max, Stillwater Pollard, J. D., Stillwater

Reiderer, Florence, Stillwater Reynolds, Cecil, Elk City Robertson, Philo R., Stillwater Robinson, Mabel, Gracemont Rodke, David, Paoli Rogers, Otis, Stillwater Rose, Fred, Shawnee

Stewart, S. J., Tuttle Stewart, Leslie, Stillwater Stober, Florence, Newkirk Swanson, Ethel, Roosevelt Swingle, Chas., Tryon

Towner, Boyd, Skedee Trolinger, Ted, Adair

Whitt, Gaines, Carney Wiatt, Ray, Geary Wood, Beulah, Stillwater Woodward, C. A., Durant Wright, Albert L., Carney

## Practical Course in Agriculture

Adair, Wm. R., Walters Anderson, Harry, Medford Arnold, Ralph, Addington

Brannin, Rector, Dallas, Texas

Carroll, Frank, Newkirk Conner, Willie, Arapaho Connors, Will, Canadian

Davis, Earl, Mounds Dillman, Robert, Agra

Elwell, Earl, Stillwater Epperson, George, Tecumseh

Fairchild, Chas. I., Morrison First, George A., Stillwater French, Jimmie, Tyrone George, Clarence, Le Veta, Colorado Arnold, Kenneth, Addington Axtelle, Chas. W., Ripley

Brixey, Clarence, Chandler

Copeland, D. C., Nash Curry, Harry, Shawnee

Dillon, John H., Geary Dudley, Leo, Wapanucka

Erlenmaier, C. E., Geary

Gilbert, Leo D., Saltfork Goodrich, Chas. K., Milam, Texas Goll, Moxie, McAlester Grant, Thomas B., Terlton

#### OKLAHOMA A. & M. COLLEGE

Harris, Cleveland, Milam, Texas Hastings, Howard K., Perkins

Johnson, Benjamin, Blake

Kilpatrick, Claude, Hunter

Lafranchi, Alfonso, Hinton

Mattingly, Will B., Newkirk Maudlin, Fulton, Chandler Michael, E. G., Deer Creek Michael, Edgar, Deer Creek

Oakes, Roe M., Ryan

Pyle, Leo, Chattanooga

Rader, Frank, Glencoe Roberts, Perry, Stillwater

Smith, Claude, Stroud Smith, J. R., Geary Spilman, Robert, Lockney, Texas Springer, Paul A., Pawnee

Thomas, Marsh, Tonkawa

Vogel, L., El Reno

Wever, W. P., Bessie Wells, Ted, Copan Wenner, David, Guthrie Whisler, Evart, Watonga

Hillman, Wm. M., Oak Grove Houck, David J., Stillwater Jones, W. J. S., Lawton

Latimer, Edgar, Paris, Texas

Murphy, Richard, Coweta Myers, Howard S., Grenville, New Mexico Myars, James, Eldorado

Ott, Bert, Ames

Rowland, Rex, Piedmont

Springer, Glen A., Pawnee Sturgis, Walla, Oklahoma City Swanson, James L., Roosevelt

Whistler, Elbert W., Boynton Wood, Paul, Stillwater Worrell, Mack, Hunter

#### Farmers' Cotton Grading Course

Alexander, E. C., Roosevelt

Beasley, Vernon, Washington Biles, G. H., Agra Booker, Howard, Durant Brady, John C., Warner

Chadd, S. G., Wayne Clounch, A. F., Lexington Coalson, Frank, Cloud Chief Cole, Roscoe, Red Oak

Davis, Tom E., Davis Downing, Robert E., Pawhuska

Hancock. Paul C., Caddo Harris, Alfred, Stillwater Head, B. T., Oklahoma City Holland, Oclos, Altus

Jean, D. Clarence, Wucheville, Arkansas

Keaton, S. H., Muskogee Kinsy, J. E., Vanoss

Langston, Walter, Thackerville Langston, Jim L., Thackerville Lowrence, James, Norman

Mason, Elmer, Duncan Mason, Harrison, Stigler

Nunn, C. N., Porter

Onstott, Herbert, Roosevelt Pollard, J. D., Stillwater Pool, E. M., Hobart Robinson, Albert E., Muskogee

Scales, Claude, Calvin Schultz, Emil, Norman Scruggs, Arthur, Hollis Smith, O. H., Keota Toles, Holland E., Lyerly, Georgia Wade, Russell, Cleburne, Texas Warren, Thomas J., Oklahoma City Watkins, Jack, Hobart

Brohammer, C. J., Prague Browning, J. M., Stillwater Brumme, Henry, Choctaw

Cox, Mrs. W. W., Harrold, Texas Cozad, R. W., Gerty Crow, Thomas, Ada

Dunlap, Gerald B., Red Oak

House, G. W., Agra Hunter, H. L., Purcell Hutchins, Chas. W., Davis Hyde, Mrs. B. M., Fort Worth, Texas

Joseph, O. K., Doxev

Kitchen, G. R., Mangum Kouri, Frank, Brinkman

Lindsey, Horace, Purcell Lowie, M. H., Cowlington

Morton, Hayden, Muskogee

Puckett, Claude, Keota Puckett, Wm. T., Keota Robinson, Chas., Muskogee Spires, W., Wilburton Stafford, Clyde, Roosevelt Stewart, J. D., Ardmore Styun, J. C. Catto

Williams, Ben, Altus Wright, F. M., Edmond Wright, Elwood, Edmond

# SUMMARY OF STUDENTS BY CLASSES

#### Session 1915-16

Graduate students	24
Senior class	88
Junior class	71
Sophomore class	129
Freshman class	302
Secondary School	293
Specials	61
Business course	164
Practical Course in Agriculture	65
Summer School, 1915	492
Cotton Grading School	63
Total Special School for Boys and Girls at Oklahoma State Fair	
Total	1,962

#### **ALUMNI**

M. J. Otey, '02, President, Stillwater, Oklahoma
M. F. Mitschrich, '13, First Vice President, Pittsburgh, Pennsylvania
W. D. Kennon, '14, Second Vice President, Stillwater, Oklahoma
Ernest Whitlock, '14, Third Vice President, Wewoka, Oklahoma
Mary Atkinson, '06, Secretary, Stillwater, Oklahoma
O. T. Peck, '08, Treasurer, Stillwater, Oklahoma

The following is a list of the graduates of the College. In case of change of address, it is especially desired that graduates advise the Registrar of same. The courses from which alumni have received their degrees are indicated as follows:

- I. Agriculture;
- II. Engineering;
- III. General Science;
- IV. Domestic Science and Art;
- V. Science and Literature;
- VI. Teachers Normal Training.

Abernathy, Ora, IV, 1915, Teacher	Louis, Oklahoma
Abernathy, Ora, IV, 1915, Teacher	Hollis, Oklahoma
Acheson, Margaret, VI, 1912, Christian Science Practitioner.	Jacksonville, Florida
Adams, A. W., I, 1896, Real Estate Agent	Ardmore, Oklahoma
Adams, A. W., I, 1896, Real Estate Agent	Ardmore, Oklahoma
(Adams), Short, Myrtle, IV, at home	Broken Arrow Oklahoma
(Aikins), McKeeman, Evelyn, IV, at home	Northfield. Connecticut
Akagi, Yutaka I., I, 1912	Address Unknown
Albert, Harold R., V, 1913, Supt. of Schools	Carney, Oklahoma
Allen, H. S., II, 1910	Address Unknown
Allen, H. S., II, 1910	Address Unknown
Anderson, P. K., II, 1915, Civil Engineer	Chanute, Kansas
Anderson, P. K., II, 1915, Civil Engineer	Woodward, Oklahoma
Anderson, R. E., V. 1908, Attorney	San Diego, California
Andrews, Maud, IV, 1915, Teacher	Talihina, Oklahoma
Arabajian, H. K., I, 1915, Manager Calexico Branch Offi	ce, Arakelian Bros.
Fruit Company	Calexico, California
Atkinson, Mary B., III, Stenographer, Exp. Sta	Stillwater, Oklahoma
Baade, H. J., V. 1910, U. S. Dept. of Agri.	Napa, California
Baard, H. J., V. 1910, U. S. Dept. of Agri	torFargo, North Dakota
Baird, R. U., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V. 1914, Coach of Athletics and head of	Dept. of Agriculture
Baird, R. U., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V. 1914, Coach of Athletics and head of	Dept. of Agriculture
Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School.  Ball, H. L., II, 1905.	Dept. of Agriculture Tulsa, Oklahoma Address Unknown
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School	Dept. of Agriculture Address Unknown  Mangum, Oklahoma
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School	Dept. of Agriculture Address Unknown  Mangum, Oklahoma
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School	Dept. of Agriculture Address Unknown  Mangum, Oklahoma
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V, 1914, Coach of Athletics and head of in in High School	tor.Fargo, North Dakota Dept, of AgricultureTulsa, Oklahoma Address Unknown Mangum, Oklahoma Banner, Oklahoma Address Unknown Address Unknown
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V, 1914, Coach of Athletics and head of in in High School	tor.Fargo, North Dakota Dept, of AgricultureTulsa, Oklahoma Address Unknown Mangum, Oklahoma Banner, Oklahoma Address Unknown Address Unknown
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V, 1914, Coach of Athletics and head of in in High School	tor.Fargo, North Dakota Dept, of AgricultureTulsa, Oklahoma Address Unknown Mangum, Oklahoma Banner, Oklahoma Address Unknown Address Unknown
Baird, K. U., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School. Ball, H. L., II, 1905	tor.Fargo, North Dakota Dept, of AgricultureTulsa, Oklahoma Address Unknown Mangum, Oklahoma Banner, Oklahoma Address Unknown Address Unknown
Baird, R. U., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School.  Ball, H. L., II, 1905. Bandel, Maude, IV, 1915, Teaching D. S. in High School.  Barnes, H. D., I, 1914, Farmer.  Bartlett, E. E. V, 1912.  Bass, Lillian, VI, 1915, Teacher in High School.  (Bellis), Means, 1da, V, 1914, at home.  Bennett, Paul, II, 1908, Commissioner of Water & Light.  Bentley M. R. II, 1908, Commissioner of Water & Light.	ltor.Fargo, North Dakota Dept. of AgricultureTulsa, OklahomaAddress UnknownMangum, Oklahoma Banner, Oklahoma Address UnknownAddress UnknownCleveland, Oklahoma Tyrone, New Mexico Stillwater, Oklahoma Wichita Falla Teyas
Baird, R. U., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School.  Ball, H. L., II, 1905.  Bandel, Maude, IV, 1915, Teaching D. S. in High School.  Barnes, H. D., I, 1914, Farmer.  Bartlett, E. E. V, 1912.  Bass, Lillian, VI, 1915, Teacher in High School.  (Bellis), Means, Ida, V, 1914, at home.  Bennett, Paul, II, 1908, Commissioner of Water & Light.  Bentley, M. R., II, 1909, Farmer.  Bilyeu, R. I., V, 1905, Teacher, Conner's State School of Ag	ltor.Fargo, North Dakota Dept. of AgricultureTulsa, OklahomaAddress UnknownBanner, OklahomaBanner, OklahomaAddress UnknownCleveland, OklahomaTyrone, New MexicoStillwater, OklahomaWichita Falls, Texas riculture
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School.  Ball, H. L., II, 1905.  Bandel, Maude, IV, 1915, Teaching D. S. in High School.  Barnes, H. D., I, 1914, Farmer.  Bartlett, E. E. V, 1912.  Bartlett, E. C. I, 1912.  Bass, Lillian, VI, 1915, Teacher in High School.  (Bellis), Means, Ida, V, 1914, at home.  Bennett, Paul, II, 1908, Commissioner of Water & Light.  Bentley, M. R., II, 1909, Farmer.  Bilyeu, R. I., V, 1905, Teacher, Conner's State School of Ag	Liter.Fargo, North Dakota Dept. of Agriculture
Baird, R. U., 111, 1908, M. S., 1913, Food Chemist and Inspec Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School.  Ball, H. L., II, 1905.  Bandel, Maude, IV, 1915, Teaching D. S. in High School.  Barnes, H. D., I, 1914, Farmer.  Bartlett, E. E. V, 1912.  Bastlett, E. C., I, 1912.  Bass, Lillian, VI, 1915, Teacher in High School.  (Bellis), Means, Ida, V, 1914, at home  Bennett, Paul, II, 1908, Commissioner of Water & Light.  Bentley, M. R., II, 1909, Farmer.  Bilyeu, R. I., V, 1905, Teacher, Conner's State School of Ag	ltor.Fargo, North Dakota Dept. of AgricultureTulsa, OklahomaAddress Unknown Mangum, Oklahoma Banner, Oklahoma Address UnknownCleveland, Oklahoma Tyrone, New MexicoStillwater, OklahomaWichita Falls, Texas ricultureWarner, Oklahoma Austin, Texas
Baird, R. O., 111, 1908, M. S., 1913, Food Chemist and Inspect Baker, De LaRue, V, 1914, Coach of Athletics and head of in High School.  Ball, H. L., II, 1905.  Bandel, Maude, IV, 1915, Teaching D. S. in High School.  Barnes, H. D., I, 1914, Farmer.  Bartlett, E. E. V, 1912.  Bartlett, E. C. I, 1912.  Bass, Lillian, VI, 1915, Teacher in High School.  (Bellis), Means, Ida, V, 1914, at home.  Bennett, Paul, II, 1908, Commissioner of Water & Light.  Bentley, M. R., II, 1909, Farmer.  Bilyeu, R. I., V, 1905, Teacher, Conner's State School of Ag	ltor.Fargo, North Dakota Dept. of AgricultureTulsa, OklahomaAddress Unknown Mangum, Oklahoma Banner, Oklahoma Address UnknownCleveland, Oklahoma Tyrone, New MexicoStillwater, OklahomaWichita Falls, Texas ricultureWarner, Oklahoma Austin, Texas

Blue, F. R., II, 1905, Farmer. Boley, A. L., II, 1908. Bonar, H. T., II, 1913, Asst. Master Mechanic, Salt Lake & Boutin, H. C., II, 1909, Watch Electrician, Commonwealth-Edi Bowers, G. W., III, 1897, Railway Conductor. Bowers, Chas., I. 1913, Teacher in Parish Agricultural School Bowers, R. D., III, 1904. Boyd, Nina, VI, 1915, Teacher in High School. Boydston, Ethel, IV, 1915, Teacher. (Braden), Robinson, Gertrude, III, 1906, at home. (Bradwell), Newby, Ollie, V, 1909, at home. Brannin, Louis, I, 1914, County Agent. (Bras), Owens, Ruth, III, 1907, at home. Breuer, E. H., II, 1911, Treasurer of El Reno Foundry & M. (Brian), DeMerritt, Naomi, IV, 1915, at home. (Breidenthal), Coppedge, Hazel, VI, 1915, at home. Rrisby, Cassie K., IV, 1915, Teacher. Brodell, Arthur C., VI, Supt. of City Schools. Broemel, Agnes, VI, 1915, Student in University of Chicago. (Brooke), Schreiber, Hazel, V, 1914, at home. Broom, Rose E., V, 1906, Primary Teacher. Brown, Chas. W., III, 1906, Research Asst. in Bacteriology, M. College. Brown, C. B., I, 1913, Asst. Dry Land Farming, U. S. Geolog Brown, J. J., II, 1903. Brown, Oliver C., II, 1914, General Electric Company. Browning, J. M., I, 1915, Manager of Farm. Buchanan, W. W., I, 1912, An Husb. Extension Dept., Iowa Buffington, Betha, IV, 1912, at home. Bullen, B. C., III, 1912, Medical Student in College of Phy Columbia University. Burleson, Betha, IV, 1913, Teacher. Burke, M. P., II, 1909, Civil Engineer, Hill Oil & Gas Co. Bullock, N. P., Jr., III, 1899. Burke, Elizabeth, IV, 1913, Teacher. Burke, M. P., II, 1909, Division Engineer, Producers Oil Co. Burke, W. J., II, 1915, Rodman & Chainman, Interstate Com- Camp, W. E., II, 1915, Rodman & Chainman, Interstate Com-	Address Unknown
Boutin, H. C., II, 1909, Watch Electrician, Commonwealth-Edi	Salt Lake City, Utah
Bowers, G. W., III, 1897, Railway Conductor	Chicago, Illinois Enid. Oklahoma
Bowers, Chas., I. 1913, Teacher in Parish Agricultural School Bowers, R. D., III, 1904	Marksville, Louisiana Address Unknown
Boyd, Nina, VI, 1915, Teacher in High School Boydston, Ethel, IV, 1915, Teacher	Stigler, Oklahoma
(Braden), Robinson, Gertrude, III, 1906, at home	Sapulpa, Oklahoma Mulhall, Oklahoma
Brandon, Edna, IV, 1915, Teacher	Stillwater, Oklahoma
(Brass), Owens, Ruth, III, 1907, at home	Okeechobee, Florida
(Print) DaMarritt Nami IV 1015 at home	El Reno, Oklahoma
(Breidenthal), Coppedge, Hazel, VI, 1915, at home	Winfield, Kansas
Brodell, Arthur C., VI, Supt. of City Schools	Ralston, Oklahoma
(Brooke), Schreiber, Hazel, V, 1914, at home	Harriston, Virgania
Brown, Chas. W., III, 1906, Research Asst. in Bacteriology, M	ichigan Agricultural
Brown, C. B., I, 1913, Asst. Dry Land Farming, U. S. Geolog	East Lansing, Michigan ical Survey
Brown, J. J., II, 1903	Garden City, Kansas Address Unknown
Brown, Oliver C., II, 1914, General Electric Company	Schenectady, New York Paragould, Arkansas
Buchanan, W. W., I, 1912, An. Husb. Extension Dept., Iowa	State CollegeAmes, Iowa
Buffington, Betha, IV, 1912, at home	Stillwater, Oklahoma
Columbia University	V York City, New York
Bullock, N. P., Jr., III, 1899	Address Unknown
Burke, M. P., II, 1909, Division Engineer, Producers Oil Co.	Tusa, Oklahoma
Burleson, Wm. L., I, 1905, Teaching & Agricultural Research	kinsburg, Pennsylvania Work, University of
Illinois* *Burnett, Roy E., III, 1905	Urbana, Illinois
Butler, Joe, II, 1915, Rodman & Chainman, Interstate Con	nmerce Commission Kansas City, Missouri
Camp, W. E., II, 1910, Sales Manager, General Electric Co	Sacramento, California Guthrie, Oklahoma
Campbell, Milton B., I, 1914, Stock Farmer	Verden, Oklahoma
Carney, Zora M., IV, 1914, at home	Rushville, Indiana
Carson, Ross L., III, 1907, Hardware Business	Perkins, Oklahoma
Carter, W. C., 11, 1911, Electrical Superintendent, 1111 On &	Shamrock, Oklahoma
Cass, Early, I, 1915, Stock Farmer	Sperry, Oklahoma
(Caton), Younge, Orpha, V, 1909, Teaching	Washington, D. C.
Chandler, Emma, V, 1915, Asst. State Agent, Extension Division Chandler, F. F., II, 1904, Asst. to Supt. of Foundries, Bethlet	nem Steel Co
(Chester), Goodwin, Bertha, III, 1907, at home	Nevada, Missouri
Choate, George R., I, 1915, Farmer.	Indianola, Oklahoma
Camp, W. E., II, 1910, Sales Manager, General Electric Compbell, Rhea, VI, 1915, at home Campbell, Milton B., I, 1914, Stock Farmer (Campbell), Santee, Viola, IV, 1913, at home Carron, Susie S., III, 1912, Hardware Business Carson, Ross L., III, 1907, Hardware Business Carter, W. C., II, 1911, Electrical Superintendent, Hill Oil &  (Casali), Peck, Louise, IV, 1911, at home Cass, Early, I, 1915, Stock Farmer (Caton), Younge, Orpha, V, 1909, Teaching Caudell, A. N., III, 1897, U. S. Dept, of Agriculture Chandler, Emma, V, 1915, Asst. State Agent, Extension Divisic Chandler, F. F., II, 1904, Asst. to Supt. of Foundries, Bethlet (Chester), Goodwin, Bertha, III, 1907, at home (Chivington), Tyson, Anna, IV, 1911, at home Chark, Arthur C., II, 1906, Mail Service Clark, Arthur C., II, 1906, Mail Service Clark, T. J., III, 1908, Office Manager, Book Dept., Webb Petrark, J. T., III, 1898, Farmer Puerto Princesa, Pala Clausen, Nellie C., IV, 1914, Teacher of D. S. in Indian Scho Clausen, Mrs. B. J., VI, 1912 Clausen, R. E., I, 1910, Instructor in University of California.	ib. CoSt. Paul, Minnesota
Clark, C. L., V, 1914	wan, Philippine Islands
Clausen, New P. J. VI. 1914, Teacher of D. S. in Indian Scho	olPhoenix, Arizona
Clausen, R. E., I, 1910, Instructor in University of California.	Berkeley, California

<sup>&</sup>quot;Deceased.

Clemmer, H. J., I, 1915, U. S. Dept. of Agriculture
Agriculture
(Cobb), Payne, Mary, IV, 1913, at home
Cole, Frank, III, 1908, Solution Foreman, Anaconda Copper Mining Co
Comstosk, Harry, II, 1905, Mining Mineville, New York
Clausen, B. O., II, 1912
Company
Company
Crawford, C. W. III. 1909. Graduate Student Asst. Dept. of Chemistry. Okla-
Crawford, C. W., III, 1909, Graduate Student Asst. Dept. of Chemistry, Okla-homa A. and M. Crocker, Fred, V, 1912, Bacteriologist
Dale, E. B., II, 1914, M., K. & T. Ry
Dolde, W. E., II, 1912, Teacher of Manual Training.  Phoenix, Arizona Dolde, W. E., II, 1912, Teacher of Manual Training.
Donart), Correy, Corra M., 111, 1900, at nome. Lawton, Oklahoma Donart, C. R., III, 1899, County Agent. Lawton, Oklahoma (Donart), Wilcoxon, Gladys K., IV, 1914, at home. Oilton, Oklahoma
Doty, Harold, I, 1915, Enid Ice & Fuel Co. Enid, Oklahoma Dougan, E. E., II, 1907, General Electric Co. Pittsfield, Massachusetts
Drummond, A. A., I, 1915, Student in University of Illinois
Duck, T. W., II, 1902
(Dysart), Teter, Minnie, III, 1899, at homeBristow, Oklahoma
Eads, Velma, IV, 1913, Teaching D. S. and Arts
Edson, E. O., I, 1915, Asst. in Charge of Poultry Clubs, Luisiana State Nniversity  Baton Rouge, Louisiana
Edson, E. O., I, 1915, Asst. in Charge of Poultry Clubs, Luisiana State Nniversity  Baton Rouge, Louisiana Elston, W. B., II, 1915, Efficiency Engineer, Dempster Mill Manufacturing Co.  Beatrice, Nebraska (English), Lantz, Maude M., III, 1907.  Address Unknown English, Wm. L., I, 1905, Supervisor of Agriculture for Frisco Lines.  St. Louis, Missouri Evans, A. Ray, I, 1912, Instructor in Farm Crops, University of Missouri Columbia, Missouri Epperson, Jesse H., V, 1914, City Bacteriologist.  Durham, North Carolina
English), Lantz, Maude M., 111, 1907
Evans, A. Ray, I, 1912, Instructor in Farm Crops, University of Missouri
Epperson, Jesse H., V, 1914, City Bacteriologist
Fansher, Ted, I, 1913, Stock Farmer
Fansher, Ted, I, 1913, Stock Farmer
Fisher, Anna, IV. 1915. Teaching D. S. in High School. Chickasha, Oklahoma
Fisher, J. M., II, 1915, Commonwealth-Edison Co
Flower, A. W., 111, 1902
Forrester, Wirt E., I, 1915, County Agent
Foster, Faye F., I, 1915, Coach of University Preparatory School. Tonkawa, Oklahoma (Foster), Rogers, Nell, I, 1914, at homeFayetteville, Arkansas

<sup>\*</sup>Deceased.

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College. East Lansing, Michigan Agricultural
College. East Lansing, Michigan
Friedemann, Wm. G., V, 1913, M. S., 1916, Graduate Asst. in Chemistry, A. and
M. College. Stillwater, Oklahoma
Frier, C. H., II, 1911, General Electric Co. Schenectady, New York
Funda, F. P., II, 1910, Engr. Dept., Rock Island Ry. El Reno, Oklahoma
 Graham, Quinton, II, 1914, Engr. Dept., Westinghouse Electric Co.

Gravelle, E. E., II, 1913
Gray, W. F., I, 1912, Farmer & Merchant
Gregory, H. W., I, 1914, Dept. of Dairying, S. D. State Agricultural College
Brookings, South Dakota
Greiner, F. M., III, 1899
Greiner, F. M., III, 1899
Address Unknown
Griggs, Oscar C., VI, 1915, Teacher.
Sapulpa, Oklahoma
Gulick, H. S., II, 1903, Metallurgical Engineer, Moore-Jones Brass & Metal Co.
St. Louis, Missouri
Guynn, P. N., II, 1904, Illinois Steel Co.
Chicago, Illinois
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Havenstrite, R. W., I, 1915, Farmer	va
Hays, Glenn G., VI, 1915, Teacher	na
Hays, Frank A., I, 1908, Asst. in Animal Husbandry, Iowa State CollegeAmes, Iow	va
Hedger, H. R., I, 1913, Farm Manager	as
Hemphill, Ora L., 11, 1909, Asst. Engineer, Miller Engr. CoLittle Rock, Arkansa	as
Henson, Ethel, IV, 1915, Teacher Raiston, Oklahom	na
(Herndon), Herron, May, IV, 1914, at home	1a
Herrick, H. C., II, 1912, Salesman, Evans & Riser AutomobilesWichita, Kansa	as
Herron, L. G., 1, 1913, Instructor, Oklahoma A. and M. CollegeStillwater, Oklahom	1a
Heston, Adrian, II, 1915, Test. Dept., Parrett Tractor Co	15
Hewett, Fall M., M. S., in Agri., 1915, Teacher Pasco, Washingto	n
Hiet, Sadie, IV, 1913, at nome	12
Hildstrand I F II 1010 Transferred France Carrel Flattic Co.	14
Indebiand, L. E., 11, 1910, Hanstolmer Engineer, General Electric Communication of the Commun	4.0
(Hill) Portlett Vara May VI 1012 at home	LS
Hines F G II 1905	793
Hohls Hugh II 1912 Transitman Missouri Pacific Ry Little Rock Arkansa	36
Hoke C. E. I. 1907. In Charge of Farm Management Investigations in Oklahoma	10
Oklahoma City Oklahom	12
Hoke, H. G., II, 1907, Sales Dept., Westinghouse Electric & Manufacturing Co.	
Wilkinsburg, Pennsylvani	ia
Hoke, Roda C., IV, 1914, Teacher Santa Fe. New Mexic	20
Hoke, Mac, I, 1912, Agriculturist, Boise High School Boise. Idah	10
Hoke, George A., V, 1911, Lawyer	ıa
Holford, Ina, VI, 1914, at home	ıa
Holleman, Gertrude, IV, 1914, Teacher	0
Holmes, D. L., V, 1908	n
Holmes, O. W., I, 1908, Asst. Professor of Dairying, Idaho State University	
Moscow, Idah	10
Holton, Pauline, IV, 1915, TeacherQuinlan, Oklahom	la
Hoover, G. W., 111, 1903, Chemist	IS
Hopps, C. W., II, 1911, Public Service Commission, N. Y	K
House, R. M., II, 1903, Hardware BusinessBristow, Oklahom	a
Houston, M. Gladys, III, 1903	0
Howell, Carl, 11, 1906	n
Hubler, W. A., III, 1910, Chemist for Illinois Steel Co. Gary, Indian	a
Huddleson, I. Forrest, V, 1915, Graduate Asst. in Bacteriology, Anicmgan Agri-	
Cultural College East Lansing, Michigal	11
Turiman, Louis D., V, 1914, Real Estate Business	U
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Huttnagel, Chas, I, 1913. Address Unknow.	n
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi  Hunt, P. Brodford, III, 1901, Hospital Staward, II, S. Nawy, Sitka, Alask	na
Huttnagel, Chas., 1, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy.  Sitka, Alask Hurst', Suite, Ning, R. III, 1903, at home.	n a a
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Huttnagel, Chas., I, 1913.  Huttnagel, Chas., I, 1913.  Hunt, Geraduate Asst in Entomology.  Address Unknow.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy.  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknow.  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Stillwater, Oklahom.  Jablow, Mrs. Chas., IV, 1915, at home.  Stillwater, Oklahom.	n ia n a
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Huttnagel, Chas., I, 1913.  Huttnagel, Chas., I, 1913.  Hutt, Gertrude, III, 1902, Teacher.  San Diego, Californi  Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  Stillwater, Oklahom  Stillwater, Oklahom  St. Paul, Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension  James, Helen, IV, 1913, Asst. Bookkeeper in Stillwater National Bank  Stillwater, Oklahom  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1912, Teacher.  Stillwater, Oklahom  Janeway, Helen, IV, 1912, Teacher.  Stillwater, Oklahom  Janeway, Lenore, V, 1908, Teacher.  Stillwater, Oklahom  Janeway, Lenore, V, 1908, Teacher.  Abilene, Texa-  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  San Francisco, California	n ia a a a a a a a a a a a a a a a a a a
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Huttnagel, Chas., I, 1913.  Hutt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Jablow, Mrs. Chas., IV, 1915, at home.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  And M. College.  Stillwater, Oklahom.  Stillwater, Oklahom.  St. Paul, Minnesota  St. Paul, Minnesota  St. Paul, Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  James, Helen, IV, 1915, Asst. Bookkeeper in Stillwater National Bank.  Jacobs, Ethelyn, VI, 1915.  Woodburn, Oregor  Janeway, George M., III, 1902, Banker.  Janeway, Helen, IV, 1912, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  San Francisco, California (Jarrell), Hartman, Mary, III, 1903, at home.  Muskogee, Oklahom.  Jeffords, Sherman, I, 1912, County Agent.  Muskogee, Oklahom.	nia an a a a a a a a a a a a a a a a a a
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal Edmond, Oklahom.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology, A. and M. College.  A. and M. College.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota St. Paul, Minnesota Lural Extension.  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1912. Teacher.  Janeway, George M., III, 1902, Banker.  Jacobs, Ethelyn, VI, 1912. Teacher.  Janeway, Lenore, V, 1908, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  San Francisco, California (Jarrelly), Hartman, Mary, III, 1903, at home.  Jeffords, Mary, IV, 1914, Teacher.  St. Louis, Missour	n a a a a a a a a a a a a a a a a a a a
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Huttnagel, Chas., I, 1913.  Huttnagel, Chas., I, 1913.  Hutt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy.  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  Stillwater, Oklahom.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  St. Paul, Minnesota  St. Paul, Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  James, Helen, IV, 1913, Asst. Bookkeeper in Stillwater National Bank.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1912, Teacher.  Janeway, Helen, IV, 1912, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  Janeway, Lenore, V, 1908, Teacher.  Jarrell), Hartman, Mary, III, 1903, at home.  Jarrell), Hartman, Mary, III, 1903, at home.  Jeffords, Mary, IV, 1914, Teacher.  St. Louis, Missour Jessee, W. B., I, 1911, Farmer.  Supply, Oklahoms  Jessee, W. B., I, 1911, Farmer.  Supply, Oklahoms  Jessee, W. B., II, 1901.  Address Unknown  Jessee, W. B., II, 1901.  Jackson, Jairen, Jackson, Expt.  Jackson, Ja	nia an a a a a a a a a a a a a a a a a a
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal Edmond, Oklahom Edmond, Oklahom Isakson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology, A. and M. College.  Stillwater, Oklahom Isakson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology, A. and M. College.  Stillwater, Oklahom Isakson, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota University of Minnesota Isakson, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  Jacobs, Ethelyn, VI, 1915.  Woodburn, Oregor Janeway, George M., III, 1902, Banker.  Janeway, Helen, IV, 1912, Teacher.  Stillwater, Oklahom Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  San Francisco, California (Jarrell), Hartman, Mary, III, 1903, at home.  Jeffords, Sherman, I, 1912, County Agent.  Leffords, Sherman, I, 1912, Teacher.  St. Louis, Missour Lessee, W. B., I, 1911, Farmer.  Supply, Oklahom Lewett, Kate A., III, 1901.  Address Unknown.	nia an a a a a anaasaaaian
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom  Jablow, Mrs. Chas., IV, 1915, at home.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  Stillwater, Oklahom  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  St. Paul, Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  Jacobs, Ethelyn, VI, 1915, Asst. Bookkeeper in Stillwater National Bank.  Jacobs, Ethelyn, VI, 1915, Stillwater, Oklahom  Janeway, Helen, IV, 1912, Teacher.  Janeway, Helen, IV, 1912, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  San Francisco, Californic (Jarrell), Hartman, Marry, III, 1903, at home.  Juffords, Sherman, I, 1912, County Agent.  Muskogee, Oklahoma Jeffords, Mary, IV, 1914, Teacher.  Supply, Oklahoma Johnson, S. B., I, 1912, Acting Horticulturist, Arizona Expt. St. and Asst.  Professor of Horticulture, University of Arizona  Cleveland Oklahom.  Johnson, Norman, N. V. 1909, Teacher.  Cleveland Oklahom.	naan a a a anaasaaaian
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Edmond, Oklahom.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  Stillwater, Oklahom.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  St. Paul, Minnesota  St. Paul, Minnesota  St. Paul, Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  James, Helen, IV, 1913, Asst. Bookkeeper in Stillwater National Bank  Janeway, Helen, IV, 1912, Teacher  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  Jarrell, Hartman, Mary, III, 1903, at home.  Lessee, W. B., I, 1911, Farmer.  Supply, Oklahoms  Jeffords, Mary, IV, 1914, Teacher  St. Louis, Missour  Lessee, W. B., I, 1912, Acting Horticulturist, Arizona Expt. Sta. and Asst.  Professor of Horticulture, University of Arizona  Tusson, Arizona  Lavez W. V. 1913, Teacher.  Collebarer.  Add. Oklahoms	naan a a a anaasaaaian aa
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher	naan a a a anaasaaaian aaan
Huttnagel, Chas., I, 1913.  Hutt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Edmond, Oklahom.  Edmond, Oklahom.  Stillwater, Oklahom.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  Stillwater, Oklahom.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  James, Helen, IV, 1913, Asst. Bookkeeper in Stillwater National Bank.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1912, Teacher.  Janeway, George M., III, 1902, Banker  Janeway, Lenore, V, 1908, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  Janeway, Sherman, I, 1912, County Agent.  Jeffords, Sherman, I, 1912, County Agent.  Muskogee, Oklahom.  Jeffords, Sherman, I, 1912, Acting Horticulturist, Arizona Expt.  Sta, and Asst.  Professor of Horticulture, University of Arizona  Johnson, Norma N., V, 1903, Teacher.  Ada, Oklahoma  Johnson, Crosby, Lucy, V, 1912, at home.  Cieveland, Oklahoma  Johnson, I. U 1003, Physician	naan a a a a anaasaaaian aaana
Huttnagel, Chas., II, 1913. Address Unknow. Hunt, Gertrude, III, 1902, Teacher. San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home. Address Unknow. Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal Edmond, Oklahom. Edmond, Oklahom. Islands, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology, A. and M. College. Stillwater, Oklahom. Stillwater, Oklahom. Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota St. Paul, Minnesota St. Paul, Minnesota Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Eacher, IV, 1913, Asst. Bookkeeper in Stillwater National Bank. Stillwater, Oklahom. James, Helen, IV, 1913, Asst. Bookkeeper in Stillwater National Bank. Woodburn, Oregon Janeway, George M., III, 1902, Banker. Collinsville, Oklahom. Janeway, Helen, IV, 1912, Teacher. Stillwater, Oklahom. Janeway, Lenore, V, 1908, Teacher. Stillwater, Oklahom. Janeway, Lenore, V, 1908, Teacher. Abilen, Texa. Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co. San Francisco, California (Jarrell), Hartman, Mary, III, 1903, at home. Muskogee, Oklahom. Jeffords, Mary, IV, 1914, Teacher. St. Louis, Missour Lessee, W. B., I, 1911, Farmer. Supply, Oklahom. Jeffords, Mary, IV, 1914, Teacher. St. Louis, Missour Lessee, W. B., I, 1911, Farmer. Supply, Oklahom. Jeffords, Alland, Johnson, A., V. 1909, Teacher. Cleveland, Oklahom. Johnson, Norma N., V, 1909, Teacher. Cleveland, Oklahom. Johnson, Laura W., VI, 1913, Teacher. Cleveland, Oklahom. Johnson, Loura W., VI, 1913, Teacher. Ada, Oklahom. Johnson, J. C., II, 1903, Physician San Dese Et. J. 1904 Fleetrical Engineer. San Dese California San Dese Et. J. 1904 Fleetrical Engineer.	naan a a a a anaasaaaian aaanaa
Huttnagel, Chas., II, 1913. Address Unknow. Hunt, Gertrude, III, 1902, Teacher. San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home. Address Unknow. Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal Edmond, Oklahom. Edmond, Oklahom. Isolates, IV, 1915, at home. Stillwater, Oklahom. Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology, A. and M. College. Stillwater, Oklahom. Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota St. Paul, Minnesota Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension. Anoka, Minnesota James, Helen, IV, 1913, Asst. Bookkeeper in Stillwater National Bank. Minnesota Jacobs, Ethelyn, VI, 1915. Stillwater, Oklahom. Jacobs, Ethelyn, VI, 1915. Stillwater, Oklahom. Janeway, Helen, IV, 1912, Teacher. Stillwater, Oklahom. Janeway, Lenore, V, 1908, Teacher. Stillwater, Oklahom. Janeway, Lenore, V, 1908, Teacher. Stillwater, Oklahom. Janeway, Lenore, V, 1908, Teacher. Abilene, Texa. Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co. San Francisco, California (Jarrell), Hartman, Mary, III, 1903, at home. Tulsa, Oklahom. Jeffords, Sherman, I, 1912, County Agent. Muskogee, Oklahom. Jeffords, Mary, IV, 1914, Teacher. Supply, Oklahom. Jeffords, Mary, IV, 1914, Teacher. Supply, Oklahom. Johnson, S. B., I, 1912, Acting Horticulturist, Arizona Expt. Sta., and Asst. Professor of Horticulture, University of Arizona Tucson, Arizona Johnson, Norma N., V, 1909, Teacher. Cleveland, Oklahom. Johnson, Laura W., VI, 1913, Teacher. Cleveland, Oklahom. Johnson, Laura W., VI, 1913, Teacher. San Jose, California Jones, E. L., II, 1904, Electrical Engineer. San Jose, California Jones, E. L., II, 1904, Electrical Engineer. San Jose, California Jones L. R. V. 1915, Graduate Student. Michigan Agricultural College.	naan aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa
Huttnagel, Chas., I, 1913.  Hutt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  A. and M. College.  Stillwater, Oklahom.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  James, Helen, IV, 1915, Asst. Bookkeeper in Stillwater National Bank.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1912, Teacher.  Janeway, Helen, IV, 1912, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  Janeway, Helen, IV, 1914, Teacher.  Jarrell, Hartman, Mary, III, 1903, at home.  Jeffords, Sherman, I, 1912, County Agent.  Muskogee, Oklahom.  Jeffords, Mary, IV, 1914, Teacher.  St. Louis, Missour Jessee, W. B., I, 1911, Farmer.  Supply, Oklahom.  Johnson, S. B., I, 1912, Acting Horticulturist, Arizona Expt. Sta. and Asst.  Professor of Horticulture, University of Arizona.  Johnson, Norma N., V, 1903, Physician.  Lawton, Oklahom.  Johnson, J. C., II, 1904, Electrical Engineer.  San Jose, California (Discose), Lucy, V, 1912, at home.  Cincinnati Ohic Johnson, J. C., II, 1904, Electrical Engineer.  East Lansien. Michigan	naan a a a a anaasaaaian aaana 1
Huttnagel, Chas., I, 1913.  Hunt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom  Jablow, Mrs. Chas., IV, 1915, at home.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  Stillwater, Oklahom  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1915.  Janeway, George M., III, 1902, Banker.  Janeway, Helen, IV, 1912, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  San Francisco, California (Jarrell), Hartman, Mary, III, 1903, at home.  Jeffords, Sherman, I, 1912, County Agent.  Jeffords, Sherman, I, 1912, County Agent.  Jeffords, Mary, IV, 1914, Teacher.  St. Louis, Missour Lessee, W. B., I, 1911, Farmer.  Supply, Oklahoma (Johnson), Crosby, Lucy, V, 1912, at home.  Johnson, S. B., I, 1912, Acting Horticulturist, Arizona Expt. Sta., and Asst.  Professor of Horticulture, University of Arizona  Johnson, Laura W., VI, 1913, Teacher.  Johnson, Crosby, Lucy, V, 1912, at home.  Johnson, J. C., II, 1903, Physician.  Lawton, Oklahoma (Johnson), Crosby, Lucy, V, 1912, at home.  Johnson, J. C., II, 1903, Physician.  Lawton, Oklahoma (Johnson), Crosby, Lucy, V, 1912, at home.  Johnson, Laura W., VI, 1913, Teacher.  Ada, Oklahoma (Johnson), Crosby, Lucy, V, 1912, at home.  Johnson, Laura W., VI, 1913, Teacher.  Johnson, J. C., II, 1903, Physician.  Lawton, Oklahoma Johnson, J. C., III, 1904, Electrical Engineer.  Jones, C. L., II, 1904, Electrical Engineer.  Jones, C. C., II, 1910, Allis-Chalm	naan a a a a anaasaaaian aaana
Huttnagel, Chas., I, 1913.  Hutt, Gertrude, III, 1902, Teacher.  San Diego, Californi Hurst, R. Bradford, III, 1901, Hospital Steward, U. S. Navy  Sitka, Alask (Hurst), Suits, Nina B., III, 1903, at home.  Address Unknown  Ives, F. H., I, 1910, Head of Department of Agriculture, Central State Normal  Edmond, Oklahom.  Jackson, Wm. E., I, 1914, M. S., in Agri. 1916, Graduate Asst. in Entomology,  A. and M. College.  And M. College.  Stillwater, Oklahom.  Jacob, A. W., I, 1913, Asst. in Agricultural Botany, University of Minnesota  Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension.  James, Helen, IV, 1915, Asst. Bookkeeper in Stillwater National Bank.  Jacobs, Ethelyn, VI, 1915.  Jacobs, Ethelyn, VI, 1912, Teacher.  Janeway, Helen, IV, 1912, Teacher.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, A. E., III, 1896, Clerk, A., T. & S. F. Ry. Co.  Janeway, Lenore, V, 1908, Teacher.  Jarrell, Hartman, Mary, III, 1903, at home.  Jeffords, Sherman, I, 1912, County Agent.  Muskogee, Oklahom.  Jeffords, Mary, IV, 1914, Teacher.  Stous, Missour Jessee, W. B., I, 1911, Farmer.  Supply, Oklahome  Lessee, W. B., I, 1911, Farmer.  Supply, Oklahome  Johnson, S. B., I, 1912, Acting Horticulturist, Arizona Expt. Sta. and Asst.  Professor of Horticulture, University of Arizona.  Johnson, Crosby, Lucy, V, 1912, at home.  Clones, E. L., II, 1904, Electrical Engineer.  Johnson, Laura W., VI, 1913, Teacher.  San Jose, California (Johnson, Crosby, Lucy, V, 1912, at home.  Clones, E. L., II, 1904, Electrical Engineer.  San Jose, California (Johnson, Crosby, Lucy, V, 1912, at home.  Johnson, San Jose, California (Johnson, S. C., II, 1904, Electrical Engineer.  Johnson, San Jose, California (Johnson, S. C., II, 1914, at home.  Johnson, Stillwater, Oklahoma  Johnson, Schaland, Allis-Chalmers Mfg. Co.  Oakley, Ohiclones, Daisy L., IV, 1914, at home.  Stillwater, Oklahoma	naan aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa

Jones, Eva, VI, 1914, Teacher Jones, C. V., III, 1902, Lawyer Jordan, Charles N., VI, 1914, Teacher	Morrison, Oklahoma
Jones, C. V., III, 1902, Lawyer	Clay Center, Kansas
Jordan, Charles N., VI, 1914, Teacher  Katz, Henrietta, VI, 1915, Teacher  Kennon, W. D., VI, 1914, Principal City High School  Kennon, Lucille, VI, 1915, Teacher  Kenyon, R. S., II, 1903  Kenyon, R. E., II, 1903  Kenyon, R. E., III, 1903, Chemist, Bureau of Animal Indus Agriculture  Kerr, R. H., III, 1903, Chemist, Bureau of Animal Indus Agriculture  Kidd, J. W., II, 1904, Professor of Engineering, State Metallurgy.  Kile, Eugene, VI, 1915, Principal, Columbus Ward	Fredericktown, Missouri
Katz, Henrietta, VI, 1915, Teacher	Sanulna Oklahoma
Kennon, W. D., VI, 1914, Principal City High School	Stillwater, Oklahoma
Kenyon, Lucille, VI, 1915, Teacher	Kaw City, Oklahoma
Kenyon, R. S., II, 1903	Address Unknown
Kerr R H III 1003 Chemist Russau of Arimal Indus	
Agriculture	Hyattville Maryland
Kezer, C. L., III, 1901, Teacher	Bellingham, Washington
Kidd, J. W., II, 1904, Professor of Engineering, State	School of Mines &
Wile Fugers VI 1015 Principal Columbus Word	Fort Bliss, Texas
(Kilnatrick) Gregory May IV 1914 at home	Brookings South Dakota
Kilpatrick, Earl, I, 1912, Ext. Dept., University of Arkansas	Little Rock, Arkansas
Kinder, W. E., III, 1903, Employe, Standard Oil Co	Wichita, Kansas
King, Beverly D., II, 1910, Sec. & Treas., Norris Engr. Co	Wharton, Texas
Kilkpatrick Katie C V 1011 Teacher	American Falls, Idano
Kirkpatrick, Cecil. IV. 1909, Professor of D. S. in High Scho	oolChickasha, Oklahoma
Knauss, E. J., I, 1905, Druggist	Kansas City, Missouri
Kuoblock, F. L., II, 1912, Architect, Mauer-Knoblock-Simank	CoBeaumont, Texas
Knoblock, Cecil C., V, 1915, Fellowship, Iowa State College	Ames, Iowa
Sciences Colorado Woman's College	Denver Colorado
Kooken, E. R., I. 1910. Practitioner.	Bellingham, Washington
Kraemer, Marguerite, VI, 1915, Teacher, State University	Preparatory School
77 11 T A 7 1012 T 1 1 T C 1 C 1	Tonkawa, Oklahoma
Krall, J. A., I, 1913, Instructor, Iowa State College	Miami Arizona
Krenns Samuel L. Ir. II. 1914. Treator. Consumers Refining	CoCushing, Oklahoma
T 1 TO 11 TO 1014 1 1	Call and Oldstein
Lahman, Kuth, V, 1914, at nome	Pawnee Oklahoma
Lane, F. P., I. 1913. County Agent	Newton, Kansas
Lantz, A. G., I, 1907	Address Únknown
Lantz, C. R., II, 1907, Elec. Engr. for Tacoma Dredging Co	Tacoma, Washington
Leicht, H. S., II, 1911	Doot of Agriculture
Leteer, C. R., 1, 1908, Dept. Dry Land Agriculture, U. S.	San Antonio. Texas
Lewis, Arthur C., III, 1901, Asst. State Entomologist	Atlanta, Georgia
Lewis, E. G., I, 1906	Tulsa, Oklahoma
(Lewis), Johnton, Myrtle I., IV, 1910, at home	Tucson, Arizona
Lincoln H I II 1003 Machine Shop Foreman A T & S	F Ry Co
Lincoln, II. J., II, 1903, Machine Shop Foreman, II., I. & S.	Chicago, Illinois
Lindsay, R. V., II, 1909	Address Unknown
(Losey), Barnes, Portia M., IV, 1913, at home	Tucson, Arizona
Lovell, Thomas J., 11, 1912, Draftsman, Southern California	Los Angeles California
Lovett A F I 1904 County Agreelturist & Agent, U. S.	Dept. of Agriculture
Krepps, Samuel J., Jr., II, 1914, Treator, Consumers Refining Lahman, Ruth, V, 1914, at home. Lahman, W. L., III, 1909, Manager of Ice & Fuel Co Lane, F. P., I, 1913, County Agent Lantz, A. G., I, 1907. Lantz, C. R., II, 1907, Elec. Engr. for Tacoma Dredging Co Leicht, H. S., II, 1911. Leteer, C. R., I, 1908, Dept. Dry Land Agriculture, U. S. Lewis, Arthur C., III, 1901, Asst. State Entomologist. Leewis, Arthur C., III, 1901, Asst. State Entomologist. Lewis, E. G., I, 1906. (Lewis), Johnton, Myrtle I., IV, 1910, at home Lewis, Carrie, III, 1905. Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. & S. Lindsay, R. V., II, 1909 (Losey), Barnes, Portia M., IV, 1913, at home Lovett, A. E., I, 1904, County Agrculturist & Agent, U. S. Lovett, A. L., I, 1908, Acting Entomologist, Oregon Agricult Lowman, E. F., V, 1912, Supt. of Schools	Redmond, Oregon
Lovett, A. L., I, 1908, Acting Entomologist, Oregon Agricult	ural College
Farmer F F V 1012 Cupt of Cabools	Red Oak Oklahoma
Lowman, E. F., V, 1912, Supt. of Schools	Stillwater, Oklahoma
Lowry, Ethel. IV. 1913, Teacher	Stillwater, Oklahoma
(Lowry), McKee, Theo., III, 1906, at home	El Paso, Texas
Lynch, H. W., II, 1912, Sub-station Operator, Commonweal	Chicago Illinois
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McArthur, C. L., III, 1911, Bacteriologist, Arkansas Expt. S	taFayetteville, Arkansas
McBride, R. V., I, 1915, Teacher	Address Unknown
McBride, H. F., 11, 1905	New Market, Tennessee
McBride, J. F., II, 1904	Address Unknown
McBride, J. D., V, 1911, Salesman, Bishop Clothing Co	Stillwater, Oklahoma
McCall, J. G., I, 1908, Instructor in Agriculture	Salt Lake City, IJtah
McClure Marguerite S V 1914 at home	McAlester, Oklahoma
McFlroy, C. H., I. 1906, Asst. in Bacteriology Dept., Oklahom	a A. and M. College
	Stillwater, Oklahoma
McIlvain, Chas., I, 1913, Farmer	igh School
McIntyre, J. C., II, 1911, Instructor in Broadwater County H	Townsend, Montana
McKay M B. VI. 1911, Asst. Plant Pathologist, Oregon	Agricultural College
McArthur, C. L., III, 1911, Bacteriologist, Arkansas Expt. S McBride, R. V., I, 1915, Teacher. McBride, H. F., II, 1903. McBride, J. F., II, 1904. McBride, J. F., II, 1904. McBride, J. F., II, 1904. McBride, J. D., V, 1911, Salesman, Bishop Clothing Co. McCall, J. G., I, 1908, Instructor in Agriculture. Block McCaslin, W. W., II, 1912, Utah Power & Light Co. McClure, Marguerite S., V, 1914, at home. McElroy, C. H., I, 1906, Asst. in Bacteriology Dept., Oklahom McIlvain, Chas., I, 1913, Farmer. McIntyre, J. C., II, 1911, Instructor in Broadwater County H McKay, M. B., VI, 1911, Asst. Plant Pathologist, Oregon	Corvallis, Oregon

McLelland, Wm., I, 1914, Farmer
McLelland, Mathilde, VI. 1914 Student University of California Berkeley, California
McMullin, Samuel L., II, 1909, Farmer, Manchester, Oklahoma
McPheeters, Marguerite, IV, 1912, Head of D. S. & Arts Dept., Murray State
School of Agriculture
McPheeters, Martha, IV, 1913, Extension Division, Oklahoma A. and M. College
Stillwater, Oklahoma
McFrieeters, Wm. H., 11, 1909, Asst. Professor of Physics Dept., 1exas A. and M.
McPhesters A A I 1012 County Agent Cuthrie Oblahoma
McReynolds, A. B., III. 1899, Accountant, Southern Pacific Milling Co.
King City, California
McReynolds, S. A., III, 1902
Malone, J. S., I, 1900, President Conners State School of Agriculture
Warner, Oklahoma
*Mannheimer, Ruth, IV, 1915.  Mantle, Guy, I, 1915, Teacher, Bethany College.  Marker, Walter, I, 1914, Hardware Business.  Orlando, Oklahoma Marple, Verne, III, 1904.  Marsh, Corinne, IV, 1915, High School Teacher.  Orlando, Oklahoma Marsh, Venus Lee, V, 1913, Teacher.  Springfield, Missouri May, Lloyd, II, 1915.  Chicago, Illinois Mayall, S. J., II, 1911, Lumber Business.  Oatman, Arizona Mayer, Sylvia, IV, 1915, High School Teacher.  Medford, Oklahoma Means, P. E., II, 1908, Burro Mountain Copper Co.  Tyrone, New Mexico Melton, Armon, V, 1915, Asst. Physical Director, A. and M. College.  Stillwater, Oklahoma Melton, W. A., II, 1903, Instructor in Physics, Michigan Agricultural College  Merrifield, F. R., I, 1913, Farmer.  Merrifield, F. R., I, 1913, Mining Enr., American Coal Co.  McComas, West Virginia Merry, George, V, 1913, M. S. in Sci. & Lit., 1915, Chemist, Consumers Refining Co.  Cushing, Oklahoma
Mantle, Guy, L. 1915. Teacher, Bethany College Bethany, West Virginia
Marker, Walter, I. 1914, Hardware Business. Orlando, Oklahoma
Marple, Verne, III, 1904
Marsh, Corinne, IV, 1915, High School Teacher
Marsh, Venus Lee, V, 1913, Teacher
Marx, Lloyd, II, 1915
Mayar, S. J., 11, 1911, Lumber Business
Means P E II 1908 Burro Mountain Conner Co Tyrone New Mexico
Melton, Armon, V. 1915, Asst. Physical Director, A. and M. College
Stillwater, Oklahoma
Melton, W. A., II, 1903, Instructor in Physics, Michigan Agricultural College
East Lansing, Michigan
Merrineld, r. K., 1, 1913, rarmer
Merry George V 1013 M S in Sci & Lit 1015 Chemist Consumers Refining
Co Cushing. Oklahoma
Merydith, C. S., I. 1912, U. S. Dept, of Agriculture Piggott, Arkansas
Miller, Bertha, V, 1906, at home
Miller, Ella, VI, 1914, Dean of Fne Arts, Phillips UniversityEnid, Oklahoma
*Miller, L. C., 1, 1900
Miller, Esther C., IV, 1914, Teacher Stillwater, Oklahoma
Miller, Miller, 17, 1914, High School Feacher San Antonio Texas
Miltimore, Cora A., III. 1899, Librarian, Pacific UniversityForest Grove, Oregon
Mitchell, Joe, VI, 1915, Principal High SchoolLehigh, Oklahoma
Mitchell, L. C., V, 1909, Chemist, Food & Drug Lab., Bureau of Chemistry, U. S.
Dept. of Agriculture
Mitschrich, M., 11, 1913, Westinghouse Electric & Manufacturing Co
Moore I A V 1011 Mountain State Tel & Tel Co. Denver Coloredo
Moore, A. I. II. 1908. Address Unknown
Moore, R. H., V, 1908, Abstractor
Moote, T. P., II, 1910, Student, University of Illinois
Morgan, Bernice, III, 1904, StenographerSheridan, Wyoming
Morris, Clinton, 111, 1898
anorits, O. M., 1, 1090, flead of Dept. of Horticulture, State College of Washington
Morrison Virginia VI 1915 Teacher Okemah Oklahoma
(Morrison), Berry, Edwing, III, 1907, at home. Stillwater Oklahoma
*Morrow, C. E., 11, 1903
(Morrow), Watkins, Jessie, III, 1903, at home
(Morrow), Hall, Ella May, IV, 1914, at home
Morrow, Bertina J., IV, 1914, at nome
Mullen Clude I 1915 Fellowshin Kansas State Agricultural College
Marhattan Kanga
Myers, S. E., III, 1899, A., T. & S. F. Ry. Co
Merrill, A. J., II. 1913, Mining Enr., American Coal Co
Needham, I. H., I, 1915 Connors State School of AgricultureWarner Oklahoma
Pitteburgh Danastinalia
Nellis, H. W., II, 1912 Address Unknown
(Nelson) Chandles Lile E III 1002 at home
(Neison), Chandler, Lifa E., 111, 1903, at nome
Nelson, Stella, III, 1903, Druggist
Nelson, Stella, III, 1903, Druggist. Washington, D. C. Nelson, J. A., III, 1905. Stella, III, 1905. Address Urknown
Nelson, Stella, III, 1903, Druggist.  Nelson, J. A., III, 1903, Druggist.  Nelson, J. A., III, 1905.  Nelson, Cyrus W., III, 1903, Physician & Surgeon.  Liberty, Texas
Needham, I. H., I, 1915 Connors State School of Agriculture

Newman, Iva F., IV, 1912, Student, University of Missouri
(Neilson), Taylor, Mary A., III, 1903, at home
O'Brien, G. E., I, 1913, State Dept. of Agriculture
Olentine, Fred B., III, 1906, Physician & Surgeon. Chicago, Illinois Olmstead, M. E., V. 1915, Teacher. Perry, Oklahoma Olen Paul F. V. 1915 Acct. Chemistry, Doct. Oklahoma A. and M. College.
Osborn, John, III, 1906. Osborn, John, III, 1906. Osborn, John, III, 1906. Osborn, John Claremore, Oklahoma
Oschman, Maude, V, 1912, High School Teacher
O'Brien, G. E., I, 1913, State Dept. of Agriculture
Painter, Ray H., V, 1912, Asst. Entomologist, Oklahoma A. and M. College
Patterson, W. H., II, 1915, County Engineer. Okemah, Oklahoma Payne, WmF, V, 1915. Amherst, Massachusetts
Payne, L. F., I, 1912, Instructor in Poultry Husb., Massachusetts Agricultural College
(Pearson), Melton, Thirza, IV, 1913, at home. East Lansing, Michigan Peck, O. T., II, 1908, Book Business. Stillwater, Oklahoma Peck, H. L., II, 1915, Book Business. Stillwater, Oklahoma
Peck, C. P., I, 1914, Book Business
Painter, Ray H., V, 1912, Asst. Entomologist, Oklahoma A. and M. College  Stillwater, Oklahoma Patterson, W. H., II, 1915, County Engineer. Okemah, Oklahoma Payne, Wim. F, V, 1915. Amherst, Massachusetts Payne, L. F., I, 1912, Instructor in Poultry Husb., Massachusetts Agricultural College. Amherst, Massachusetts Pearson), Melton, Thirza, IV, 1913, at home. East Lansing, Michigan Peck, O. T., II, 1908, Book Business. Stillwater, Oklahoma Peck, H. L., II, 1915, Book Business. Stillwater, Oklahoma Peck, C. P., I, 1914, Book Business. Stillwater, Oklahoma Pigg, H. F., II, 1902, Electrical Engineer, Witherbee, Sherman & Co
111000, 500.000, 7, 1712, 40 200.000
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M.
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. CollegeStillwater, Oklahoma Ratliff, J. A., I, 1907, Asst. Experimental Agronomy, University of Nebraska Lincoln, Nebraska Lincoln, Nebraska Rector, F. L., V, 1902, Great Bear Spring CoBrooklyn, New York Reed, Fred A., II, 1911Suttons Bay, Michigan Reeve, C. T., II, 1907Address Unknown Reeve, J. R., II, 1915, Westinghouse Electric & Manufacturing CoPittsburgh, Pennsylvania Reeve, H. W., I, 1907, FarmerMustang, Oklahoma *Regnier, C. E., III, 1899Mustang, Oklahoma Regnier, M. A., II, 1911Address Unknown Reichman, Elizabeth, V, 1915, TeacherSapulpa, Oklahoma Reichman, Mabel L., V, 1915, TeacherSapulpa, Oklahoma Reynolds, F. S., I, 1915, Graduate Student, Iowa State CollegeAmes, Iowa Reynolds, E. B., I, 1914, Instructor in Agronomy, Texas A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College. Stillwater, Oklahoma Ratliff, J. A., I, 1907, Asst. Experimental Agronomy, University of Nebraska Lincoln, Nebraska Lincoln, Nebraska Rector, F. L., V, 1902, Great Bear Spring Co. Brooklyn, New York Reed, Fred A., II, 1911 Suttons Bay, Michigan Reeve, C. T., II, 1907. Address Unknown Reeve, J. R., II, 1915, Westinghouse Electric & Manufacturing Co. Pittsburgh, Pennsylvania Reeve, H. W., I, 1907, Farmer Mustang, Oklahoma Regnier, C. E., III, 1899. Address Unknown Regnier, M. A., II, 1911. Address Unknown Reichman, Elizabeth, V, 1915, Teacher. Sapulpa, Oklahoma Reichman, Mabel L., V, 1915, Teacher. Stillwater, Oklahoma Reynolds, F. S., I, 1914, Instructor in Agronomy, Texas A. and M. College Station, Texas Reynolds, O. H., II, 1914, Draftsman, Union Pacific Ry. Co. Kansas City, Missouri Rhodes, T. W., II, 1913, General Electric Co. Schenectady, New York
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College
Rapp, C. W., I, 1915, Student Asst. Horticultural Dept., Oklahoma A. and M. College

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Russell, Mamie, IV, 1915, Graduate Student Asst., Dept. of D. S., Oklahoma A. and M. College	
and M. CollegeStillwater, Oklahoma	1
Russell, Carl, I, 1914, Connell State School of Agriculture	ì
Ryno, Madeinic, 17, 1713, Teacher	
Santee, L. A., II, 1913, J. B. Kirk Gas & Smelting Co	a
Schaefer, Paul, 11, 1915, Drattsman, Oklahoma Ry, Co Oklahoma City, Oklahoma	1
Schreiber S C I 1913. Farmer Harriston, Virginia	a
Schwark, C. W., I, 1914, Fruit Grower	0
Scott, Wiley, I, 1915, Farmer Carnegie, Oklahoma	1
Scott, 120ra, V, 1913, Hanson-Roach-Fowler Co	S
Scruggs, P. G., I, 1915, Agriculturist, Cameron State School of Agriculture	
Lawton, Oklahoma	1
Selement F C II 1910 Auto Repairing Yukon Oklahoma	3
Selph, Nina, IV, 1915, Teacher Stigler, Oklahoma	3
(Semke), Harrington, Grace E., V, 1906, at homeFairmont, Oklahoma	1
Shallenberger, Garvin, V, 1912, Teacher Weight Mariette Oklahoma	1
Shaw, Ava. IV. 1914. Principal County High School Jacksonboro, Texas	S
Shiflett, H. D., I, 1913	1
Shiflett, R. F., I, 1914, Farmer Standing Rock, Oklahoma	3
Shiftett, R. C., I, 1911, County Agent	1
Shively, R. Rex. III, 1902, Supt. Pittsburgh Coal Products Co.	
Pittsburgh, Pennsylvania	3.
Short, Robert, 1, 1913, Instructor in Haskell State School of Agriculture	a
Sieglinger, J., I, 1913, Bureau of Plant Industry, U. S. Dept. of Agriculture	
Woodward, Oklahoma	1
Simank, Ben, II, 1915, Draftsman, with J. P. Annon, Architect Shreveport, Texas	5
Smelk E. W., 11, 1914, Architect, Mauer-Knoblock-Smank Commediation, 1exas	1
Smith, J. G., I, 1911, Real Estate Business	3
Smith, John Graham, I, 1914, RancherNewlin, Texas	S
Smith, E. J., 1114 Address Unknown	1
Smith, A. Ray, I, 1915, Farmer	a
Smith, C. Ray, V, 1910, Real Estate BusinessStillwater, Oklahoma	à
Smith, R. R., V, 1913, Rancher	5
Spaulding, J. A., I. 1905, Asst. Cashier, Globe Grain & Milling Co	
Los Angeles, California	à.
Spaulding, H. B., V, 1910, Medical Student, University of Michigan	,
Spear, Mary, IV, 1915, Teacher, Oklahoma School for DeafSulphur, Oklahoma	2
Spear, Maud, II, 1915, at home	1
Spencer, E. L., I, 1915, Asst. in Library, Oklahoma A. and M. College	,
Spidel, H. M., I, 1910, Farmer Rome, Iowa	1
Spohn, R. E., II, 1910, Farmer Glencoe, Oklahoma	ì
Spohn, Carolyn M., IV, 1915	1
Stallings, Ida, IV. 1915, Teacher Morrilton, Arkansas	1
Stanley, May, VI, 1915, Teacher Stillwater, Oklahoma	
Stebbins, A. A., II, 1909, Postmaster	l
Steponis, R. R., V, 1909	1
Stevens, Margaret M., IV, 1914, Teacher Stillwater, Oklahoma	1
(Stewart), Jesse, Annabel, V, 1911, at home	1
Stiles G W III 1900 Rectariologist Rureau of Chemistry II S Dept of	l
Agriculture	)
Stinson, C. C., I, 1914, County Agent	1
(Stover), Olson, Nama, V, 1909, at home	
Straub, Otto, I, 1910, Dairyman with Polk Sanitary Milk CoIndianapolis, Indiana	1
Swope, H. M., II, 1913, A., T. & S. F. Ry	5
(Swope), Dolde, Emma H., 111, 1898	1
Russell, Carl, I, 1914, Connell State School of Agriculture Ryno, Madeline, IV. 1913, Teacher Stillwater, Oklahoma Ryno, Madeline, IV. 1915, Draftsman, Oklahoma Ry. Co	
Talbot, Nora A., VI, 1910, Head of D. A. Dept., Oklahoma A. and M. College	
Talbot A F I 1912 Health Dept Food & Dainy Division Vennes Circulations	1
Ambet, A. E., 1, 1912, Health Dept., Food & Dairy Division Kansas City, Missouri	L

\*Deceased.

(Tankersley), McAninch, Lola M., III, 1900, at home
Tate, J. A., II, 1909 Address Unknown
Taylor, Inez, IV. 1915, Teacher
(Taylor), Ellis, Jeannette, III, 1907
(Temming), Casteel, Ruth E., IV, 1912, at homeSapulpa, Oklahoma
Thomas I R I 1015 County Agent Medford Oklahoma
Thompson, Eugene, I. 1913, Farmer Emet, Oklahoma
Thornberry, J. W., I, 1904 Address Unknown
Thornberry, W. T., II, 1902
(Thoroughman), Williams, Maude, III, 1904, at home
Tice Fula V. 1915 Teacher Hollis, Oklahoma
Tillottson, Bonnie, III, 1909, TeacherOklahoma City, Oklahoma
Tillottson, A. K., V, 1912, Principal High SchoolThomas, Oklahoma
Tingle, J. T., 1915. Schoolton, Oklahoma
Tourtellotte Fyert I 1914 Teaching Agriculture in High School Plymouth Wisconsin
Treeman, Herbert L., II, 1909, Edison Electric Illumination CoBrooklyn, New York
Trent, Dover, V, 1913, Supt. of Schools Stigler, Oklahoma
Trueax, C. P., II, 1911, By-Products Cike Co
Turner, Homer, 1, 1915, TeacherLawton, Oklahoma
Wilkinsburg, Pennsylvania
Vance, Leon R., I, 1914, High School Teacher
Venters, H. D., V, 1915, Asst. Bacteriologist, State Board of Health
Vance, Leon R., I, 1914, High School Teacher
Walker, K. D., I. 1913
Walker, Ethel, V, 1902, High School TeacherOrange, California
Walker, L. E., V, 1914, Teacher Fort Worth, Texas
Walker, Pay B., 111, 1905, Art Teacher
Walker Florence K III 1903 Stenographer II S Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C.  Walker, Veda, III, 1906.  Walker, Belle, III, 1902, at home.  (Walker), Swinford, Velma, at home.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Selle, III, 1902, at home.  Stillwater, Oklahoma City, Oklahoma Walters, Julia, IV, 1913.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College  Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College  Ware, Alta, IV, 1915, Teacher.  Waren, Jessie M., IV, 1915, High School Teacher.  Watson, W. E., I, 1913, High School Teacher.  Watson, W. E., I, 1913, High School Teacher.  Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Oklahoma Red Lake Minnesota Watson, W. P., II, 1913, Teacher.  Red Lake Minnesota
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Selle, III, 1906.  Walker, Selle, III, 1902, at home.  (Walker), Swinford, Velma, at home.  Stillwater, Oklahoma City, Oklahoma City, Oklahoma Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College McPherson, Kansas Ware, Alta, IV, 1915, Teacher.  Warren, Jessie M., IV, 1915, Teacher.  Stillwater, Oklahoma Warren, Jessie M., IV, 1915, High School Teacher.  Pryor, Oklahoma Watrous, Robert C., II, 1910, Jewelry Business.  Cushing, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio Watson, Florence, VI, 1913, Teacher.  Red Lake, Minnesota Watson, D. H., II, 1911.  Address Unknown Weever, Earl, II, 1913, High School Teacher.  Graceville, Minnesota Winnesota Winnesota Winnesota Unknown Weever, Earl, II, 1913, High School Teacher.  Graceville, Minnesota
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Washington, D. C. Anaheim, California Walker, Belle, III, 1902, at home.  (Walker, Selle, III, 1902, at home.  (Walker), Swinford, Velma, at home.  Stillwater, Oklahoma Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College  Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College  Warre, Alta, IV, 1915, Teacher.  Stillwater, Oklahoma Warren, Jessie M., IV, 1915, High School Teacher.  Pryor, Oklahoma Watrous, Robert C., II, 1910, Jewelry Business.  Cushing, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio Watson, D. H., II, 1911.  Address Unknown Watson, D. H., II, 1914.  Machael Minnesota Watson, D. H., II, 1914.  Machael Minnesota Webb, Howard F., II, 1914, Bacteriologist, Cnty Dept. of Health.  Toledo, Ohio Webb, Leone M. IV, 1914, Asst. Bacteriologist, Civ. Dept. of Health.  Toledo, Ohio Webb, Leone M. IV, 1914, Asst. Bacteriologist, Civ. Dept. of Health.  Taledo Ohio
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Selle, III, 1906.  Walker, Selle, III, 1902, at home.  Walker, Selle, III, 1902, at home.  Walker, Selle, III, 1908.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College  Stillwater, Oklahoma  Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College  McPherson College  McPherson Kansas  Ware, Alta, IV, 1915, Teacher.  Stillwater, Oklahoma  Watrous, Robert C., II, 1915, High School Teacher.  Pryor, Oklahoma  Watson, W. E., I, 1913, High School Teacher.  Milaca, Minnesota  Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio  Watson, Florence, VI, 1913, Teacher.  Watson, D. H., II, 1914.  Weaver, Earl, II, 1914, Pacteriologist, Cnty Dept. of Health.  Toledo, Ohio  Webb, Howard F., II, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio  Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Two Harbors, Minnesota  Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio  Weber, A. G., V, 1915, Principal of High School  Storng City Oklahoma
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C.  Walker, Veda, III, 1906
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Washington, D. C. Anaheim, California Walker, Belle, III, 1902, at home.  (Walker, Selle, III, 1902, at home
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Julia, 1906.  Walker, Selle, III, 1902, at home.  (Walker), Swinford, Velma, at home.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College  Stillwater, Oklahoma  Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College  McPherson College  Marre, Alta, IV, 1915, Teacher.  Stillwater, Oklahoma  Warre, Alta, IV, 1915, Teacher.  Stillwater, Oklahoma  Warrous, Robert C., II, 1910, Jewelry Business.  Cushing, Oklahoma  Watson, W. E., I, 1913, High School Teacher.  Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio  Watson, D. H., II, 1911.  Address Unknown  Weaver, Earl, II, 1913, High School Teacher.  Graceville, Minnesota  Webb, Howard F., II, 1914, Bacteriologist, Cnty Dept. of Health.  Toledo, Ohio  Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio  Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio  Webb, Leone M., IV, 1915, Principal of High School.  Pittsburgh, Pennsylvania  Wells, E. E., II, 1912  Merner, Ida A. V, 1912 Student University of Checago.  Citize Illia is
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Selle, III, 1906.  Walker, Selle, III, 1908.  Walker, Selle, III, 1909. at home.  (Walker), Swinford, Velma, at home.  Stillwater, Oklahoma City, Oklahoma City, Oklahoma Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College McPherson, Kansas Ware, Alta, IV, 1915, Teacher.  Warren, Jessie M., IV, 1915, High School Teacher.  Watrous, Robert C., II, 1910, Jewelry Business.  Cushing, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Milaca, Minnesota Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio Watson, Florence, VI, 1913, Teacher.  Red Lake, Minnesota Watson, D. H., II, 1914, Bacteriologist, Cnty Dept. of Health.  Weaver, Earl, II, 1914, High School Teacher.  Webb, Howard F., II, 1914, Asst. Bacteriologist, Cnty Dept. of Health.  Toledo, Ohio Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Two Harbors, Minnesota Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio Weber, A. G., V, 1915, Principal of High School  Storng City, Oklahoma Wells, E. E., II, 1913.  Wells, E. E., II, 1913.  Matheria, California
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Belle, III, 1902, at home.  (Walker, Selle, III, 1902, at home.  (Walker), Swinford, Velma, at home.  Stillwater, Oklahoma City, Oklahoma *Walters, Julia, IV, 1913.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College  Stillwater, Oklahoma Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College  McPherson, Kansas  Ware, Alta, IV, 1915, Teacher.  Stillwater, Oklahoma Warren, Jessie M., IV, 1915, High School Teacher.  Pryor, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Watson, W. E., I, 1913, High School Teacher.  Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio Watson, D. H., II, 1911.  Maddress Unknown Weaver, Earl, II, 1914, Bacteriologist, Cnty Dept. of Health.  Toledo, Ohio Webb, Howard F., II, 1914, Ast. Bacteriologist, City Dept. of Health.  Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Webb, Leone M., IV, 1915, Principal of High School.  Storng City, Oklahoma Weber, Herbert K., II, 1915, Westinghouse Electric & Manufacturing Co.  Pittsburgh, Pennsylvania Wells, E. E., II, 1913. Student, University of Chocago.  Chicago, Illinois Whipple, Arthur F., V. 1914, M. S. in Sci. & Lit. 1916, Graduate Student Oklahoma A. and M. College.
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Washington, D. C. Anaheim, California Walker, Belle, III, 1902, at home.  (Walker, Sunford, Velma, at home.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College Stillwater, Oklahoma Walters, Marguerite P., IV, 1910, Head of D. S. & A. Dept. McPherson College McPherson, Kansas Ware, Alta, IV, 1915, Teacher.  Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson, Kansas Warren, Jessie M., IV, 1915, High School Teacher.  Warren, Jessie M., IV, 1915, Teacher Stillwater, Oklahoma Watrous, Robert C. II, 1910, Jewelry Business.  Cushing, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Milaca, Minnesota Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio Watson, Florence, VI, 1913, Teacher.  Red Lake, Minnesota Watson, D. H., II, 1911.  Address Unknown Weaver, Earl, II, 1913, High School Teacher.  Graceville, Minnesota Webb, Howard F., II, 1914, Bacteriologist, City Dept. of Health.  Toledo, Ohio Weber, A. G., V, 1915, Principal of High School.  Storng City, Oklahoma Weber, Herbert K., II, 1915, Westinghouse Electric & Manufacturing Co.  Pittsburgh, Pennsylvania Werner, Ida A., V, 1912, Student, University of Chocago.  Whipple, Arthur F., V, 1914, M. S. in Sci. & Lit. 1916, Graduate Student Oklahoma A. and M. College.  Whitleside, A., I, 1913.  Maddress Unknown Whiteside, A., I, 1913.  Maddress Unknown Whiteside, A., I, 1913.  Myniteside, A., I, 1914.  Maddress Unknown Webbit Englisher, V, 1914.  Maddress Unknown Webbit Englisher, V, 1914.  Maddress Unknown Whiteside, A., I, 1913.  Maddress Unknown Whiteside, A., I, 1913.  Maddress Unknown Webbit Englisher, V, 1914.  Maddress Unknown
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C. Walker, Veda, III, 1906.  Walker, Veda, III, 1906.  Walker, Selle, III, 1902, at home.  (Walker), Swinford, Velma, at home.  Stillwater, Oklahoma City, Oklahoma City, Oklahoma Walters, Julia, IV, 1913.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College  Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson College  McPherson College  McPherson College  Mare, Alta, IV, 1915, Teacher.  Stillwater, Oklahoma Warren, Jessie M., IV, 1915, High School Teacher.  Pryor, Oklahoma Watson, Robert C., II, 1910, Jewelry Business.  Cushing, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Milaca, Minnesota Watson, W. P., II, 1913, Civil Engineer, Morgan Engr. Co.  Dayton, Ohio Watson, Florence, VI, 1913, Teacher.  Red Lake, Minnesota Watson, D. H., II, 1914, Bacteriologist, Cnty Dept. of Health.  Minnesota Webb, Howard F., II, 1914, Bacteriologist, Cnty Dept. of Health.  Toledo, Ohio Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio Webb, Leone M., IV, 1914, Asst. Bacteriologist, City Dept. of Health.  Toledo, Ohio Weber, A. G., V, 1915, Principal of High School  Meber, Herbert K., II, 1913.  Wells, E. E., II, 1913.  Mells, E. E., II, 1913.  Mells, E. E., II, 1913.  Mathema M., V, 1914, M. S. in Sci. & Lit. 1916, Graduate Student Oklahoma A. and M. College.  Stillwater, Oklahoma White, H. H., II, 1913, Transitman, Missouri Pacific Ry.  Little Rock, Arkansas Whiteside, A., I, 1913.  Mathema Mean, V, 1914, County Agent.  Wewoka, Oklahoma City, Ok
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Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey
Walker, Florence K., 111, 1903, Stenographer, U. S. Geological Survey
Walker, K. D., I, 1913.  Walker, K. D., I, 1913.  Walker, Ethel, V, 1902, High School Teacher.  Walker, Ethel, V, 1902, High School Teacher.  Walker, Ethel, V, 1903, Art Teacher.  Walker, Fay B., III, 1905, Art Teacher.  Libertyville, Illinois Walker, Fort Worth, Texas Walker, Fay B., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C.  Walker, Veda, III, 1906.  Walker, Belle, III, 1902, at home.  (Walker, Swinford, Velma, at home.  Walters, Julia, IV, 1913.  Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College Stillwater, Oklahoma Walters, Marguerite P., IV, 1910, Acting Librarian, Oklahoma A. and M. College Stillwater, Oklahoma Walters, Minnie C., IV, 1910, Head of D. S. & A. Dept. McPherson, Kansas Ware, Alta, IV, 1915, Teacher.  Ware, Alta, IV, 1915, Teacher.  Ware, Alta, IV, 1915, Teacher.  Ware, Jessie M., IV, 1915, High School Teacher.  Wartous, Robert C., II, 1910, Jewelry Business.  Cushing, Oklahoma Watson, W. E., I, 1913, High School Teacher.  Milaca, Minnesota Watson, D. H., II, 1911.  Maddress Unknown Watson, Florence, VI, 1913, Teacher.  Red Lake, Minnesota Watson, D. H., II, 1914, Bacteriologist, Cnty Dept. of Health.  Weaver, Earl, II, 1913, High School Teacher.  Webb, Howard F., II, 1914, Bacteriologist, Cnty Dept. of Health.  Webb, A. E., II, 1912, Instructor in Agriculture in High School.  Webb, A. G., V, 1915, Principal of High School  Webb, A. G., V, 1915, Principal of High School  Weber, Herbert K., II, 1913, Westinghouse Electric & Manufacturing Co.  Pittsburgh, Pennsylvania Werner, Ida A., V, 1912, Student, University of Chocago.  Chicago, Illinois Webr, A. G., V, 1915, Principal of High School  Weber, Herbert K., II, 1913, High School Teacher.  Oklahoma A. and M. College.  Whipple, Arthur F., V, 1914, M. S. in Sci. & Lit. 1916, Graduate Student  Oklahoma A. and M. College.  White, H. H., II, 1913, Transitman, Missouri Pacific Ry.  Little Rock, Arkansas Whiteside, A., I, 1913.  Address Unknown  Wilbourn, Verda, VI, 1915, High School Teacher.  Ok

<sup>&</sup>quot;Deceased.

Wiley, R. C., III, 1905, Chemist	Manhattan, Kansas
Williams P. J. 1013	Addrose Unknown
Williams, A. L., 1, 1710	Maria de San Olikilowii
Williams, Guy P., Electrical Engineer	Milwaukee, Wisconsin
Will, Doris G., II, 1910, Westinghouse Electric & Manufactu	iring Co
	Pittsburgh, Pennsylvania
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Winters, N. E., I, 1911, Supt. of Texas Agr. Expt. Station	, Sub-Station No. 3
	Angleton Texas
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Trial Clark IV, 1710, I cachel	A James, Wyoming
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(Wise), Lantz, Mable, IV, 1909, at home	Tacoma, Washington
Wise, Oscar, I. 1914, Employed by Searcy Grocery Co	Stillwater, Oklahoma
(Wise), Lantz, Mable, IV, 1909, at home	Printing Co
(Wiley, Diggs, Dianoit, V, 1990, Manager Maranes Democra	Stillwater Oklahoma
Wood, C. A., II, 1908, City Engineer & County Surveyor	Daniel Oklationia
Wood, C. A., 11, 1908, City Engineer & County Surveyor	Perry, Oklanoma
Wood, Ray Allen, II, 1914, Westinghouse Electric & Manuf	acturing Co
Wi	lkinsburg, Pennsylvania
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W	Ikinshura Pennsulvania
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Word Gurtha R V 1014 High School Teacher	Turone Oklahoma
Word, Guita Ke, V, 1914, 111gh School Teacher	A 31 Uklanoma
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Wright, Louise, VI, 1912, High School Teacher	Powell, Wyoming
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Young, J. E., II, Draftsman, Babcock & Wilcox Co	Barberton Ohio
Young, Kenneth R., II, 1914, U. S. Inspector, Mississippi Ri	ver Commission
Toung, Kenneta K., 11, 1914, O. S. Inspector, Mississippi Ki	
**************************************	Count Lake, Mississippi
F 1 1 F1 TI 1000	4 1 1
Znamenacheck, Ed, II, 1908	Address Unknown

# **ACCREDITED SCHOOLS**

Students who have completed the course of study in accredited schools will be given credit at the A. and M. College according to the following schedule:

#### LIST 1

Graduates from the following schools will be accepted as Freshmen without any conditions:

Ada	Durant	Lexington
Afton	Eldorado	Lindsay
Altus	Elk City	McAlester
Anadarko	El Reno	McLoud
Apache	Enid	Madill
Arapaho	Eufaula	Mangum
Ardmore	Phillips University	Marietta
Atoka	Academy, Enid	Marlow
Bartlesville	Fairfax	Marshall
Beaver	Fairview	Maud
Beggs	Francis	Medford
Blackwell	Frederick	Miami
Boswell	Geary	Muldrow
Bristow	Granite	Murray School of
Broken Arrow	Grove	Agriculture,
Carmen	Guthrie	Tishomingo
Carney	Guymon	Muskogee
Chandler	Oklahoma Methodist	Mountain View
Checotah	University Academy	Newkirk
Cherokee	Guthrie	Noble
Chelsea	Haskell School of	Norman
Chickasha	Agriculture, Broken	Nowata
Oklahoma College for	Arrow	Okemah
Women, Chickasha	Hennessey	Oklahoma City
Claremore (U. P. S.)	Henryetta	Okmulgee
Cleveland	Hinton	Oktaha
Clinton	Hobart	Pauls Valley
Coalgate	Holdenville	Panhandle School of
Collinsville	Hollis	Agriculture,
Copan	Hominy	Goodwell
Cordell Christian Col-	Hugo	Pawhuska
lege, Cordell	Keats	Pawnee
Cordell	Kiefer	Perry
Cushing	Kingfisher College	Ponca City
Custer City	Academy, Kingfisher	Pond Creek
Davis	Kingfisher	Porum
Dewey	Laurence Friends	Poteau
Drumright	Academy, Gate	Pryor
Duncan	Lawton	Purcell

Sulphur Ramona Walter Wapanucka Roff Tecumseh Temple Watonga Rvan Sallisaw Texhoma Waurika Sapulpa Thomas Waynoka Tishomingo Welch Savre Tonkawa (U. P. S.) Seminole Weleetka Tulsa Wewoka Shawnee Henry Kendall Col-Wilburton Skiatook lege. Tulsa Snyder Woodward Vinita Stigler Wynnewood Stillwater Wagoner Yukon Stilwell

#### LIST 2

Graduates from the following schools will be admitted as Freshmen, but conditioned in from ½ to 3 units of work:

Alva	Gage	Lone Wolf
Britton	Grandfield	Okfuskee County High
Broken Bow	Haileyville	School, Paden
Carnegie	Hartshorne	Randlett
Council Hill	Haskell	Spiro
Devol	Idabel	Stroud
Drummond	Kingston	Vian
Erick	Lehigh	Waukomis

#### LIST 3

Graduates from the following schools will be given 8 to 11½ credits. Necessary work for additional credits may be taken in the Secondary School at the A. and M. College:

Bigheart	Gotebo	Mounds
Braggs	Howe	Prague
Canadian	Ingersoll	Red Oak
Crowder	Krebs	Tupelo
Dacoma	Laverne	Wister
Dale	Morris	Yale
Forgan		

#### LIST 4

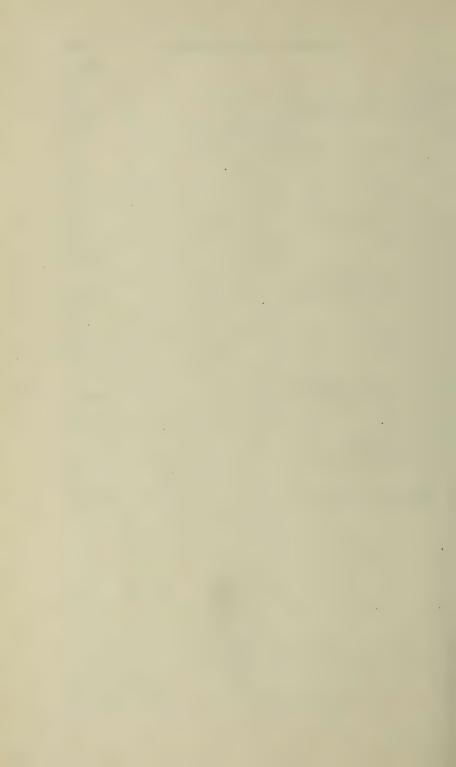
Graduates from the following list of schools will be given from 4 to 7½ credits, and will be expected to make up the remainder of the necessary credits in the Secondary School of the A. and M. College:

Balko	Gowan	Sparks
Boynton	Lenapah	Stonewall
Capron	Ochelata	Wainright
Delaware	Okarche	Webbers Falls
Fort Gibson	Red Rock	

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OKLAHOMA A, & M. COLLEGE PRINTING DEPARTMENT

## BULLETIN

OF

# THE OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

CATALOG 1916-1917



PUBLISHED QUARTERLY BY

OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

STILLWATER, OKLAHOMA

### BULLETIN

OF THE

# OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE STILLWATER, OKLAHOMA

# ANNUAL CATALOG

1916-1917

WITH ANNOUNGEMENTS FOR 1917-1918

PUBLISHED QUARTERLY BY THE OKLAHOMA AGRI-CULTURAL AND MECHANICAL COLLEGE STILLWATER, OKLAHOMA

APRIL-MAY-JUNE, 1917

VOLUME 14

NUMBER 2

# CHART OF OKLAHOMA A. & M. COLLEGE WORK

1. Complete Courses of Instruction

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Agricultural and Mechanical

College

Oklahoma

The College, after twentyofficers, a group of fourteen brick and stone buildings, a science equipment costing more than a quarter of a million, and 1,000 acres of land. Total value of buildings, grounds and equip-ment, \$903,414.07

consists of 123 teachers and

ings,

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Agricultural Experiment Station tests and ree publications.

Lectures at Farmers' Institutes and other meetings.

Lectures at Teachers' Normals and Institutes, and publishing special literature.

for the study of Agriculture, Domestic Science Organizing Boys and Girls Clubs at home and related subjects.

the Smith-Lever Act-the county agent work Agricultural Extension under the terms of in Agriculture and Home Economics.

### COLLEGE CALENDAR

### First Semester

### 1917

September 6, Thursday—Entrance Examinations.

September 6 and 7, Thursday and Friday—Registration.

September 8, Saturday—Classwork Begins.

November 19, Monday-Short Course in Agriculture Opens.

November 29, Thursday—Thanksgiving Day, a Holiday.

December 22, Saturday—Christmas Holidays Begin.

December 28, Friday-Farmers Week Opens.

### 1918

January 2, Wednesday—Work of First Semester Resumes. January 22, Tuesday—First Semester Closes.

### Second Semester

January 22, Tuesday—Entrance Examinations.

January 23 and 24, Wednesday and Thursday-Registration.

January 25, Friday-Classwork Begins.

February 23, Saturday—Short Course in Agriculture Closes.

Easter Vacation Begins Friday Morning Before Easter Sunday and Closes Monday Morning After Easter Sunday.

May 26, Sunday—Baccalaureate Sermon.

May 31, Friday—Commencement Day; Second Semester Closes.

### Summer Session

June 3, Monday—Summer Session, College Credit and Business Training Courses Open.

August 2, Friday—Summer Session, College Credit and Business Training Courses Close.

(The Faculty reserves the right, without further notice, to modify any announcement made in this catalog if circumstances render such change necessary, and in any event will be bound by it for only the year following the date of publication.)

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ALMON AI ARNOLD
(A. B., Wittenberg College)
Instructor in Foreign Languages

CAROLYN ISABEL BABB (A. B., University of Kansas) Instructor in Secondary School

ALBERT HENRY NELSON
(A. B., A. M., Wabash Collège)
Instructor in English

EDWARD ANTONY BENBROOK
(V. M. D., University of Pennsylvania)
Instructor in Veterinary Science

MARY EDITH WHARTON
(B. S., Muskingum College)
(Diploma, Capitol College of Oratory and Music)
(Diploma, New School of Methods in Public School Music)

Instructor in Voice

MILDRED VIRGINIA TALBOT

(A. B., University of Illinois)

(Certificate, Pratt Institute)

(Certificate, Columbia University)

Instructor in Domestic Art

EWALD W SCHUHMANN

(A. B., A. M., University of Texas)

Instructor in Physics

HELEN AMES WENTWORTH

(B. S., Iowa State College)

Instructor in Domestic Art

WILLIAM JOHN BECKER

(A. B., Adelbert College, Western Reserve University)

(M. S., Ohio State University)

Instructor in Chemistry

instructor in Chemistry

CHARLES JOEL MOORE
(E. E., University of Texas)
Instructor in Electrical Engineering

WILLARD RUDE

(Gem City Business College)
(Ransomerian School of Penmanship)
Instructor in Business Training

JAMES WARREN EVANS
(B. S. C. E., C. E., Purdue University)
Instructor in Civil Engineering

MERLE ARTHUR SWENEY
(A. B., Hedding College)
(A. M., University of Illinois)

Instructor in English

EDITH E BRATTON (Leipzig Conservatory)

Instructor in Violin

CLINTON HARRIMAN COWGILL
(B. S., University of Illinois)
Instructor in Architecture and Architectural Engineering

FRANK BAKER CROSS

(B. S. H., Ohio State University)

Instructor in Horticulture

MARION ALBERT ANDREEN

(A. B., Augustana College)

(A. B., Yale University)

Instructor in Chemistry

FREDERICK SYLVESTER HATHAWAY
(V. M. D., University of Pennsylvania)

Instructor in Veterinary Medicine

MABEL CLAIRE HUEY (Graduate, Normal Department, Art Institute) Instructor in Art

### **Assistants**

OSCAR MUNCIE
(Diploma, Northwestern State Normal, Oklahoma)
Assistant in Secondary School

KATE VERMILLION (Graduate, Baylor College) Assistant in Piano

EDWARD EUGENE HARNDEN
(B. S., Oklahoma A. and M. College)
Assistant in Chemistry and Bacteriology

HELEN LUCRETIA MOODY
(A. B., A. M., Kinglisher College)
Assistant in English, Secondary School

RUTH ANN PARKS

(B. L., Christian College)
(B. M., University of Oklahoma)

Assistant in Piano

FEARN BERNARD HAMILTON
(B. S., Oklahoma A. and M. College)

Assistant in English

FRITZ ARMON MELTON
(B. S., Oklahoma A. and M. College)
Assistant in Physical Training for Men

JOHN WILLIAM BRIDGES
(Diploma, Central State Normal, Oklahoma)
(B. S., Oklahoma A. and M. College)

Assistant in Secondary School

FRED McCARREL
(Diploma, Central State Normal, Oklahoma)
(B. S., Oklahoma A. and M. College)
Assistant in Secondary School

JOHN TRUMAN HORNER
(A. B., University of Oklahoma)
(B. S., Oklahoma A. and M. College)
Assistant in Commerce and Marketing

WILLIAM EDGAR JACKSON
(B. S., M. S., Oklahoma A. and M. College)
Assistant in Entomology

MAMIE RUSSELL
(B. S., Oklahoma A. and M. College)
Assistant in Domestic Science

MARGARET UNSER
(Graduate, Mary Wood Hinman School of Gymnastic and Folk Dancing)
Assistant in Physical Training for Women

MARY CATHERINE LAWSON
(Academy of Fine Arts, Chicago)
(Certificate, Central State Normal, Oklahoma)
Assistant in Drawing and Art

CORAL DUKE NATHAN

(A. B., A. M., Ohio State University)

Assistant in Foreign Languages

LAURA WRIGHT JOHNSON
(A. B., Hampton College)
(B. S., Oklahoma A. and M. College)
Assistant in English, Secondary School

### Graduate Student Assistants

CHARLES WORKMAN RAPP
(B. S., Oklahoma A. and M. College)
Fellow in Horticulture

\*CHARLES WALLACE CRAWFORD (B. S., Oklahoma A. and M. College) Graduate Student Assistant in Chemistry

\*PAUL FREDERICK ORR
(B. S., Oklahoma A. and M. College)
Graduate Student Assistant in Chemistry

### OKLAHOMA A. & M. COLLEGE

\*MERRITT E OLMSTEAD
(B. S., Oklahoma A. and M. College)
Graduate Student Assistant in Chemistry

### Student Assistants

ANNIE FRANCIS
Business Training

LOIS DAVIDSON
Library

JOE IRA DAVIS
Manual Training

JEFF CAMPBELL
Athletics

JOHN WALTER HINKEL Bacteriology and Chemistry

AMSA McDOWELL
Music

MARTHA THOMAS
Chemistry

ROY THEODORE HOKE
Agronomy

HENRY HOWARD FINNELL
Agronomy

SHERMAN KRISHER
Agronomy

CHARLES SYLVESTER MOORE
Chemistry

EVERETT CLIFTON SHERWOOD

Chemistry

\*Resigned.

### COLLEGE OFFICERS

JAMES WILLIAM CANTWELL

(A. B., A. M., Baylor University)

(A. B., Yale University)

President

EDGAR ELI BREWER
Foreman of Shops
Superintendent of Buildings

EDWARD JOHNSTON WESTBROOK Superintendent, Printing Department

WALTER STEMMONS
(B. J., University of Missouri)

Editor of Publications

CHARLES ALFRED POFFENBERGER
(Houston Business University)
Registrar and Secretary to the Faculty

MONROE JOB OTEY
(B. S., Oklahoma A. and M. College)
Financial Secretary and Purchasing Agent

EDWARD RANDLE PERDUE
Secretary to the President

MARGARET PEARL WALTERS
(B. S., Oklahoma A. and M. College)

Assistant Librarian

MRS. FREDERICK CHARLES KENT
Matron and Dean of Women

CHRISTIAN JENSEN
(Graduate, Biltmore School of Forestry)
Superintendent of Greenhouse and Landscape Gardener

WILLIAM MELVILLE HOWELL
Assistant to the Financial Secretary

MARY ANGUS STORRIE
(H. A., College of Industrial Arts, Texas)
Stewardess, College Dining Hall

CHARLES DUDLEY SIMMONS
(M. D., Louisville Medical College)
(New York Postgraduate Medical School and Hospital)

College Physician

ELBERT WILLIAMS

Bookkeeper, Financial Secretary's Office

CHARLES HOLMES STONE

(B. S., M. A., University of Georgia)

(B. L. S., University of Illinois)

Librarian

CLYDE VANCE DAVIE Foreman, Poultry Plant

NOTE .- Officers listed in point of priority.

### AGRICULTURAL EXPERIMENT STATION STAFF

J. W. CANTWELL, A. M. President of the College

W. L. CARLYLE, M. S. Director

L. L. LEWIS, M. S., D. V. M. Veterinarian

C. E. SANBORN, M. A. Entomologist

CHAS. K. FRANCIS, Ph. D.

Chemist

W. L. FOWLER, B. S. A. Animal Husbandman

M. A. BEESON, D. Sc. Agronomist

F. M. ROLFS, Ph. D. Horticulturist

A. C. BAER, B. S. A. Dairyman

C. H. McELROY, B. S. Assistant Bacteriologist

H. R. PAINTER, M. S. Assistant Entomologist

D. A. SPENCER, B. S.
Assistant Animal Husbandman

B. A. AHRENS, B. S. Poultryman

ADRIAN DAANE, M. S. Assistant Agronomist

W. L. BLIZZARD, B. S.
Assistant Animal Husbandman

C. A. BURNS, B. S. Assistant Dairyman

H. L. THOMSON, A. B. Farm Engineering

WALLACE MACFARLANE, Ph. D. Assistant Agronomist

D. G. MORGAN, B. A.
Assistant Chemist

WM. G. FRIEDEMANN, M. S. Assistant Chemist

C. W. RAPP, B. S. Assistant Horticulturist

FRANK B. CROSS, B. S. Assistant Horticulturist

H. T. BENNETT, M. S.

Assistant Chemist

CHARLES UNWIN Creameryman

GLEN BRIGGS, B. S. Station Farmer

PERRY ROBERTS
Foreman of Horticultural Grounds

M. J. OTEY, B. S.
Financial Secretary and Purchasing Agent

LULA M. TOURTELLOTTE

Executive Clerk

LULU M. MITCHELL
Mailing Clerk

MARGARET RAY
Stenographer

MABLE BURNETT
Stenographer

MARY ATKINSON, B. S. Stenographer

RHODA HOBSON
Clerk in Dairy Department

### College Stenographers

TREVA BLACKWELL School of Engineering

IRA BIDWELL SHERMAN Financial Secretary's Office

EDWINA IKARD

College Publications and School of Commerce and Marketing

FLORENCE RAY
Registrar's Office

CLARA OLMSTEAD
Registrar's Office

MARY LONG WEISS

Chemistry, Library, Botany, English Departments, and School of Home Economics

ELIZABETH BURKE, B. S. President's Office

### EXTENSION DIVISION STAFF

JAMES ALEXANDER WILSON
(B. S. A., University of Minnesota)
Director of Extension and State Agent

JOHN SAMUEL MALONE
(B. S., Oklahoma A. and M. College)
Assistant Director of Extension and Assistant State Agent

EMMA ALVERNON CHANDLER
(B. S., Oklahoma A. and M. College)
Assistant State Home Demonstration Agent

JOHN EARL SWAIM
Assistant State Boys Club Agent

DIXIE BOHON TUCKER

(A. B., Millersburg Academy)

(M. D., Bennett Medical College)

Specialist in Rural Sanitation

GEORGE WILSON
(Diploma, Central State Normal, Oklahoma)
Professor of Agriculture for Schools

THOMAS WESLEY MOSELEY
(M. S., University of Nebraska)

Specialist in Dairying from Bureau of Animal Industry, Washington, D. C.

CHARLES LEONARD CHAMBERS
(B. S., Alabama Polytechnic Institute)

Livestock Club Specialist from Bureau of Animal Industry, Washington, D. C.

MARTHA RATCLIFFE McPHEETERS
(B. S., Oklahoma A. and M. College)
Assistant Home Demonstration Agent

HARRY EMBLETON
(B. S., Cornell University)

Assistant in Charge of Poultry Club Work from Bureau of Animal Industry, Washington, D. C.

WILLIAM JOHN GREEN
(B. S., Oklahoma A. and M. College)
Assistant Boys Club Agent

DOROTHY MARIE SEXAUER
(B. S., Oklahoma A. and M. College)
Assistant Home Demonstration Agent

CHARLES ALEXANDER McNABB Specialist in Marketing and Rural Organization

THEODORE HENRY MITTENDORF
(B. S., Oklahoma A. and M. College)

Assistant Dairy Specialist

CHAS. E. HOKE

(B. S., Oklahoma A. and M. College)

Specialist in Farm Management from Bureau of Farm Management, Washington, D. C.

HARRIET LETHE MORROW

Secretary and Office Manager of Extension Division

The state of the s

ARTHUR ERNEST BENTLEY
Bookkeeper and Assistant Secretary

XERA RUTH WHITE Civil Service Stenographer

MINNIE McCOY Stenographer

NELLIE MAY KNIGHT

Mailing Clerk

JULIA WILHELMINA DONART

Multigraph Operator

RUTH EDNA BURNHAM Stenographer

VERNA FRANCES PIERCE.
Stenographer

### District Agents

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J. M. DAILY Northeast District

JOHN M. WHITE Southeast District

C. W. CALLARMAN Central District

B. M. JACKSON Panhandle and Harper County

GEORGE W. VINCENT Northwest District

MRS. DAISY M. FRAZIER
District Agent for Women Agents

### County Agents

E. BELCHER Okemah, Okfuskee County

R. C. BLOCKER Idabel, McCurtain County

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B. F. BROWN (col.) Boley, Okfuskee County

J. I. BUNYARD Arnett, Ellis County

GEO. S. CHRISTY Tishomingo, Johnston County

W. A. CONNER Frederick, Tillman County

O. C. COOPER Chickasha, Grady County

BEN CRAWFORD Altus, Jackson County

E. DICKERSON Pryor, Mayes County C. R. DONART Oklahoma City, Oklahoma County

> D. BAKER Tulsa, Tulsa County

C. G. EVANS Wilburton, Latimer County

L. H. FASH Durant, Bryan County

CHAS. D. FOREMAN Tahlequah, Cherokee County

H. GARLAND Madill, Marshall County

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WM. F. GRAY Woodward, Woodward County

> A. P. GREGORY Alva, Woods County

J. W. GUIN Chandler, Lincoln County

> JOE B. HILL Ada, Pontotoc County

J. L. HOWE Atoka, Atoka County

C. M. HUBBARD Wagoner, Wagoner County

GEORGE INNES Antlers, Pushmataha County

> S. E. LAIRD Perry, Noble County

JAS. LAWRENCE Norman, Cleveland County

B. T. LAWSON Sallisaw, Sequoyah County

GEORGE R. LEA Pauls Valley, Garvin County

S. M. McCUISTION Sapulpa, Creek County

A. A. McPheeters Guthrie, Logan County

B. F. MARKLAND Stillwater, Payne County

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R. C. MELOY Claremore, Rogers County

R. C. MOORE Shawnee, Pottawatomie County

> T. H. MOORE Stigler, Haskell County

B. B. MOSTELLER Anadarko, Caddo County H. R. NAYLOR Walter, Cotton County

I. H. NEEDHAM El Reno, Canadian County

J. F. NEELY Lawton, Comanche County

J. F. NEWSOM Beaver, Beaver County

J. W. OWENS Purcell, McClain County

F. F. PARKER Hobart, Kiowa County

C. A. PATTERSON Cherokee, Alfalfa County

GEORGE RANSOM Clinton, Custer County

J. M. RAPP Watonga, Blaine County

J. F. RIDDELL Newkirk, Kay County

F. L. ROUNSEVELL Muskogee, Muskogee County

CARL RUSSELL Ardmore, Carter County

H. W. C. SHELTON Poteau, Leflore County

ROBERT P. SHORT Okmulgee, Okmulgee County

L. E. STEWART Holdenville, Hughes County

C. C. STINSON Ryan, Jefferson County

G. E. THOMAS Vinita, Craig County

J. R. THOMAS Medford, Grant County

W. B. TUCKER Duncan, Stephens County

J. M. VANDERSLICE Hollis, Harmon County

E. H. VINCENT Miami, Ottawa County

H. E. WHEAT Buffalo, Harper County

ERNEST WHITLOCK Wewoka, Seminole County

O. L. WOLF Eufaula, McIntosh County

H. M. WOLVERTON Nowata, Nowata County

J. A. WYATT Hugo, Choctaw County

W. T. YOAKUM Coalgate, Coal County

### Women Agents

MISS GLADYS R. ANTHONY Madill, Marshall County

MRS. EUNICE M. BLOCKER Idabel, McCurtain County

MISS IVA M. BURCH Bartlesville, Washington County

MRS. ELIZABETH H. CLARK Stillwater, Payne County

MISS SARAH CLARKE Claremore, Rogers County

MRS. NETTIE R. CORYELL Chickasha, Grady County

MISS ANNA L. DIEHL Okemah, Okfuskee County

MRS. ELVA R. DUVALL Oakman, Pontotoc County

MRS. JENNIE L. FASH Durant, Bryan County

MRS. IDA GIGRAY Hobart, Kiowa County

MISS ELLA HARRISON Oklahoma City, Oklahoma County

MRS. ELLA INNES Antlers, Pushmataha County

MRS. VIRDIE E. MOORE Shawnee, Pottawatomie County

MRS. EVA M. MOSTELLER Anadarko, Caddo County

MRS. MARY H. NEWSOM Beaver, Beaver County

MRS. OLLIE M. NIPPER Chandler, Lincoln County

MISS FRANCES REED Okmulgee, Okmulgee County

MRS. MATTIE I. ROYSE Elk City, Beckham County

MRS. JOSIE C. SARTAIN Tahlequah, Cherokee County

MISS JESSIE SHANNON Tulsa, Tulsa County

MISS MAUDE SMITH (col.) Boley, Okfuskee County

MRS. A. N. SOUTHWICK Enid, Garfield County

MRS. CORA L. TAYLOR Talihina, Leflore County

MRS. MARY D. WARE Wynnewood, Garvin County

### COLLEGE CADET CORPS

ARTHUR J. DAVIS
Captain of Infantry, U. S. Army
Commandant of Cadets

MICHAEL McDONALD Sergeant Major, U. S. Army, Retired Assistant Commandant of Cadets

### Regimental Staff

GAIL V. MITCHELL Captain and Adjutant

JACK BRISCOE
Captain and Quartermaster

FLOYD M. BILYEU
Sergeant Major

T. M. AYCOCK
Quartermaster Sergeant

HAROLD JANEWAY

Color Sergeant

CLAUDE ROUSE
Color Sergeant

### Regimental Band

BOH. MAKOVSKY Director of Music Leader

CALVIN McKEE
Chief Musician

G. K. DICKSON Principal Musician

ALBERT HACKER
Drum Major

C. E. BREWER Sergeant

LESLIE SWIM Sergeant

I. A. NELSON Sergeant

S. R. STONE Sergeant

C. G. JONES Sergeant

R. ROBERTSON Sergeant

DANA RYAN Sergeant

CLYDE HUSTON Sergeant

> R. MORGAN Sergeant

### First Battalion

Major A. E. Forsyth
First Lieutenant and Battalion Adjutant, Floyd Keller

	COMPANY A	COMPANY B						
Captain	OSCAR D. MCNEELY	C. E. MURRAY						
First Lieutenant		HARRY GARLOCK						
Second Lieutenant	JEFF CAMPBELL	EDWARD BUDDRUS						
First Sergeant		HERBERT IVES						
Sergeants		Ross Wiley						
	CLAUDE SALE	En_Woons						
	RILEY SITTER DAVE WILSON	J. E. Ketchum						
	DAVE WILSON	John Wilson C. J. Robinson						
Corporals	Tesse Morrison	Тони Н. Соу						
Corporats	ESTON HOSTETTER	JOHN HAM						
	FRED BEARD	John_Cowen						
	Leslie Brown Cecil Berry	JOE HAM						
	CECIL BERRY							
	COMPANY C	COMPANY D						
Captain	Joe Blackburn	W. J. BECK						
First Lieutenant	E. D. McTaggart	HARRY RANSOM						
Second Lieutenant	M. G. HARNDEN	W. E. West						
First Sergeant	S. C. CALLAWAY	R. A. LARNER						
Sergeants	EARL RUTTER	S. M. GODFREY						
	L. H. ROCKETT	W. S. Marsh						
	E. F. PERCY J. D. POLLARD	M. H. BRIGHT L. S. WORTMAN						
C1-		Otto Friedemann						
Corporals	RAY JONES	MACE SPANGLER						
	HARVEY KEMP	LAWRENCE STOKESBERRY						
		Noble Brattin						
Second Battalion								

### Second Battalion

Major J. A. Black First Lieutenant and Battalion Adjutant, H. H. Finnell

FIRST LIEUT	ENANT AND DATIALION	ADJUTANT, II. II. FINNELL
	COMPANY E	COMPANY F
Captain	G. L. GLOECKNER	Virgil Caldwell
First Lieutenant		· EARL R. FRENCH
Second Lieutenant	J. M. Woodson Fred L. Jones	OTIS REED
First Sergeant	J. R. SPENCER	F. L. BEVER
Sergeants	Walter Weaver M. C. Courtney John Nation	Morgan Wal <b>ker</b> J. W. Cantwell, Jr. Sherman Krisher Chas. Moore
Corporals	W. A. Cooley Clif Gallagher Walter Rey Edw. Hull James Murray	L. R. Terry R. Kello Roy Atkinson H. E. Keller H. M. Turner
	COMPANY G	COMPANY H
Captain	R. L. ANDERSON	C. P. WHEELER
First Lieutenant		J. A. KIMBELL V. J. BOOTH
Second Lieutenant	R. W. KENNY	C. D. Emmons
First Sergeant	M. A. CASH	WAYNE WOODRUFF
Sergeants		A. D. SMITH
	Chas. Percival E. D. Markwell J. T. Harris Herbert Lahr	LAWRENCE CORRELL E. R. HENSON JAMES BRYCE GEORGE SCHOOLER
Corporals	W. R. SMITH	Deane Bishop Henry Labohm Glenn Marica

### Unassigned

MAJOR J. M. WILSON

### Retired

MAJOR J. H. SCOTT
CAPTAIN CHARLES ROBINSON
CAPTAIN P. C. HOGGARD
FIRST LIEUTENANT C. E. McELROY
FIRST LIEUTENANT E. B. HILDEBRAND
FIRST LIEUTENANT MYRON MARX
SECOND LIEUTENANT MYRON DOUGLAS
SECOND LIEUTENANT R. N. MATHEWS

# STANDING COMMITTEES OF THE FACULTY 1917-18

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DISCIPLINE

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RAIFORD, Chairman; JABLOW, MICHAELS

GRADES AND REPORTS

GUNDERSON, Chairman; CHAMBERS, NORA TALBOT

DORMITORY

BEESON, Chairman; KENT, HARTSOCK

STUDENT PLAYS AND SOCIAL ENTERTAINMENTS
Moorhouse. Chairman: Arnold. Miller

COURSES OF STUDY

BOYD, Chairman; DEANS OF SCHOOLS

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STEMMONS, Chairman; HEADS OF DEPARTMENTS

SCHEDULE

LANE, Chairman; SHULER, FRANCIS

DINING HALL SUPPLIES

DOERING, Chairman; STORRIE, OTEY

STUDENT LABOR
BOYD, Chairman: BEESON, LEWIS

ATHLETIC COUNCIL

LEWIS, Chairman; GALLAGHER, MOORHOUSE

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KEMP, Chairman; CARLYLE, CHAMBERS, MOORHOUSE

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KEMP. Chairman: MARONEY. ROLFS

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CONVOCATION PROGRAM
HARTSOCK, Chairman; Francis, Spencer

# OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE

The Oklahoma Agricultural and Mechanical College is a State and Federal institution of higher and broader learning, offering technical, scientific education to white persons 14 years of age and over, and carrying valuable scientific information to many thousands who can never visit or attend a college.

The service rendered by the A. and M. College to the State is three-fold:

(1) To educate and train in all that relates to applied science, the industries and citizenship, by affording both liberal and technical studies, laboratories, shops and fields for development of character, the mind and industrial efficiency—the College proper.

The A. and M. College consists of seven schools comprising thirty departments. These schools offer distinct courses of instruction to those applying for graduation. The Schools of Agriculture, Engineering, Home Economics, Science and Literature, Education and Commerce and Marketing offer the degree Bachelor of Science (B. S.) to graduates, and Master of Science (M. S.) to those completing a postgraduate course. The degree of Doctor of Veterinary Medicine (D. V. M.) is offered to those completing the course in Veterinary Medicine.

- (2) To carry forward investigations in agriculture of a research or experimental nature, to learn and disseminate new facts of importance to farmers and the youth of the State—the Agricultural Experiment Station.
- (3) To instruct citizens of the State, who are not residents at the College, and their families, in the best proven methods of

economic agriculture and domestic science—the Extension Division.

Tuition is free in all courses and departments. The College is supported by the Federal Government and by the State of Oklahoma as a part of the free school system.

### LAWS CONCERNING THE COLLEGE

The A. and M. College owes its origin to a bill offered by United States Senator Morrill of Vermont in 1862, which provides funds for one such institution of learning in every State of the Union, and set aside certain public lands from which endowments have come to each of these State and Federal Colleges. Therefore these institutions are known as "The Land Grant Colleges".

This Act of Congress, approved July 2, 1862, gave to each State which accepted its provisions 30,000 acres of Government land for each of its Representatives in Congress, the proceeds to be applied to the endowment and maintenance of colleges.

"where the leading subject shall be, without excluding the other scientific and classic studies, and including military tactics, to teach such branches of learning as are related to agriculture and mechanic arts, . . . in order to promote the liberal and practical education of the industrial classes in the various pursuits and professions of life."

Again, in 1887, Congress provided for an Agricultural Experiment Station in connection with each of the Land Grant Colleges:

"That in order to aid in acquiring and diffusing among the people of the United States useful and practical information on subjects connected with agriculture and to promote scientific investigation and experiments respecting the principles and application of agricultural science, there shall be established under the direction of the College in each State or Territory, established . . . in accordance with an . . . 'Act donating public land to the several States and Territories which may provide colleges for the benefit of agriculture and the mechanic arts' . . . a department to be known and designated as an 'Agricultural Experiment Station'"

The First Legislature of the Territory of Oklahoma adopted a resolution assenting to and accepting the provisions of Congress and established the Oklahoma Agricultural and Mechanical College in Payne County, at Stillwater, December 25, 1890.

Congress also provided 250,000 acres of public land as a per-

manent endowment for the College in the Enabling Act granting statehood to Oklahoma.

The Oklahoma Constitution provides that the State Board of Agriculture shall be the Board of Regents of the A. and M. College in the following:

"Said Board (of Agriculture) shall be maintained as a part of the State Government and shall have jurisdiction over all animal quarantine regulations and shall be the Board of Regents of all State Agricultural and Mechanical Colleges, ..."

The Oklahoma Constitution is the only State Constitution recognizing the fundamental importance of agriculture and domestic science. It declares that—

"The Legislature shall provide for the teaching of agriculture, horticulture, stock feeding and domestic science in the common schools of the State."

According to the laws of Oklahoma "The Agricultural and Mechanical College shall be the technical head of the Agricultural, Industrial and allied Science system of education in Oklahoma".

### SOURCES OF REVENUE

The Agricultural and Mechanical College derives support from both Federal and State Governments:

- 1. A fund derived from the United States Government that may be used for certain forms of class instruction in the College, known as the "Morrill Fund". This fund can be expended only for instruction of students in literature, languages, the sciences, and, by recent amendment, to prepare school teachers in the principles of agriculture and home economics.
- 2. The United States Government funds for investigation of scientific and agricultural matters of importance to farmers, and for publishing the results of such tests and experiments, known as the Hatch and Adams Funds. These support the Oklahoma Agricultural Experiment Station.
- 3. A fund derived from the rentals of public lands donated by Congress to the Oklahoma A. and M. College under the Enabling Act granting statehood to Oklahoma, known as the "Land Lease Fund". This fund may be used for operating expenses of the College proper.

- 4. A fund appropriated annually or biennially by the State for buildings, repairs and extensions to the permanent equipment of the A. and M. College.
- 5. The Smith-Lever Bill, adopted by the Sixty-Third Congress, provides increasing support for cooperative agricultural extension work for a period of ten years, when the permanent basis of this support is reached. This fund is dependent upon cooperative support by the State and is available only for agricultural extension work.

### INSTRUCTION FOR TEACHERS

The A. and M. College prepares teachers of science, of the industrial subjects and of related common branches.

The First State Legislature created the Chair of Agriculture for Schools in the A. and M. College,

"whose duty it shall be to direct and advise in all matters relating to the teaching of agriculture and allied subjects in the common schools, . . . He shall visit the schools, the teachers' institutes, the summer normal schools and the State Normal Schools, advise with the teachers and officers concerned . . . and shall distribute such leaflets and other literature as may be helpful to teachers and pupils concerned or engaged in teaching industrial, practical and scientific subjects."

### The law also states that:

"the Agricultural and Mechanical College, its President, professors and employes shall lend such assistance in carrying out the objects, aims and purposes of the State Constitution regarding the teaching of agriculture and allied practical subjects as shall not conflict with the immediate duties incumbent on them in said institution."

The School of Education.—To supply the State with trained teachers in industrial subjects, as contemplated by existing State laws, a School of Education is maintained.

Section 16, Article 14, of Chapter 219, Session Laws of 1913, as amended and approved April 1, 1915, says:

"After January, 1918, no person shall receive a third grade certificate unless he shall have had either academic training equivalent to one year in an approved high school of this State, or have had at least ten weeks' professional training in one of the Oklahoma State Normal Schools, State University or A. and M. College, or an institution in this State, or other State, having equivalent teachers' professional course; and no person shall receive a second grade certificate unless he shall have had either academic training equivalent to two years in an approved high school of this State, or have had at least twenty weeks' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or institution in this State, or other State having equivalent teachers' professional course; and no person shall receive a first grade certificate unless he shall have had either academic training equivalent to three years in an approved high school of this State, or have had at least thirty-six weeks' professional training in one of the Oklahoma State Normal Schools, State University, A. and M. College, or an institution in this State or other State having equivalent teachers' professional course."

The Summer Normal.—To further supply the demand in Oklahoma for trained teachers, the A. and M. College conducts a complete summer normal institute for teachers. Members of the College Faculty are available as instructors, and specialists of note are also employed to assist in making the instruction of greatest value. Attendance upon the summer term assures full credit for training demanded under the School law quoted above.

By a recent act of the State Legislature, A. and M. College is enabled to issue teachers' state life certificates.

Acceptance by the State of the terms of the Smith-Hughes Bill opens great opportunities for the A. and M. College. This measure provides for the training of teachers, supervisors and directors in agriculture, home economics and the trades.

### LAND, BUILDINGS AND EQUIPMENT

The A. and M. College campus and farm embrace a tract of 1,000 acres.

The present buildings were erected by the State at a cost of more than half a million dollars, and they are equipped with the latest and best appliances and scientific apparatus, representing an outlay by the State and Federal Governments of almost as much. All buildings are steam heated, electric lighted, and have sewer connections.

The Sixth Legislature appropriated \$200,000 for new buildings at A. and M. College, and of this sum \$100,000 will be used for an Armory-Gymnasium, and a similar amount for a Science Hall. Work on these buildings will be rushed.

Engineering Building.—Erected 1912. Cost \$74,994.50. Three stories. Covers 160 by 80 feet. Reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories and boilerroom, the electrical laboratory, the civil engineering laboratories for testing cement, masonry and steel, rooms for surveying instruments, storage-batteres, standardizing room, men's locker room, and office. On the lext floor are the engineering library, the physical laboratory and ecture room, four other lecture rooms for the various departnents, and rooms for photometry, physical apparatus, stock and

women's lockers. On the top floor are the quarters for the Department of Architectural Engineering, consisting of a lecture room, library and reading room and large drafting room. There are also on this floor four drafting and lecture rooms for the use of other departments, rooms for records, and offices for instructors.

Shop Building.—Erected 1912. Cost \$4,420.00. Stone and brick building. Forty by 200 feet; for a depth of 80 feet it is two stories high, and the balance one story. Constructed mainly by student labor and of material from the old shop. Provides accommodations for the carpenter, machine and blacksmith shops and foundry, and has up-to-date toolrooms, etc., complete.

Heating Plant.—Erected 1912. Cost \$40,000.00. Furnishes heat and light for all College buildings and power for the shops.

Chapel Building.—Erected 1912. Cost \$84,075.28. Covers a ground area of 97 by 150 feet. Reinforced concrete and brick with stone trimmings. Sloping floor and large balcony. Roomy stage, with dressing rooms and accessories. Seating capacity 2,500.

Woman's Building.—Erected 1910. Cost \$62,000.00. Contains gymnasium, dining hall and kitchen, reception hall, parlor, classrooms for domestic science and domestic art, and living rooms for the accommodation of girl students. Rooms are electric lighted, steam heated, and all halls are equipped with lavatories and baths. The Dormitory is under supervision of a matron.

Boys' Dormitory.—Erected 1910. Cost \$25,000.00. Brick construction. Three stories. Equipped with all modern conveniences.

Chemistry Building.—Erected 1898. Cost \$12,000.00. Twostory brick structure with basement. Main portion 64 by 42 feet, wing 54 by 32 feet. Houses chemistry laboratory of the Experiment Station, classrooms and laboratories for instruction in agricultural and general chemistry.

Library Hall.—Erected 1901. Cost \$48,417.42. Brick and stone building, two stories and basement, 76 by 72 and 111 by 65 feet. It is used in addition to accommodation of library and read-

ing rooms, for the Departments of Zoology and Veterinary Medicine, Drawing and Art Work, with lecture rooms, toilet rooms, etc., in the basement.

Central Building (the original building of A. and M. College).—Erected 1892. Cost \$25,000.00. Two-story brick and stone building with basement, 66 by 60 feet. Used for classrooms and printing plant.

Morrill Hall.—Erected 1906. Cost \$74,600.00. Three stories. Brick and stone construction, 76 by 166 feet. Named in honor of Senator Justin S. Morrill, by Act of the Legislative Assembly providing for its construction. Contains quarters for administration and business offices of the A. and M. College and Agricultural Experiment Station, and lecture rooms and laboratories for the Departments of Animal Husbandry, Horticulture, Botany and Entomology.

Dairy Building.—Erected 1904.—Cost \$7,947.74. Brick structure of two stories, 60 by 30 feet, and one-story addition of 50 by 32 feet. Contains classrooms, laboratories, and a commercial creamery for experimental and instructional purposes.

Agronomy Building.—Erected 1906. Cost \$11,182.91. Two-story brick building. Soil and crop laboratories, classrooms, farm machinery laboratory, etc. Gymnasium occupies one wing of building.

Livestock Judging Pavilion.—Erected 1910. Cost \$15,239.93. Two-story brick structure, affording accommodations for study of the fine livestock owned by the College. Contains classrooms in addition to an amphitheater with a seating capacity of 500, and an arena 50 feet square.

Old Engineering Building.—Erected 1902. Cost \$8,000.00. Brick and stone structure of two stories and basement. Occupied by Departments of Music and Business Training.

Greenhouse.—Erected 1909. Cost \$5,000.00. Part of the equipment of Departments of Horticulture and Botany.

Poultry Plant.—Main building for laboratories and classrooms was built in 1913 and cost \$2,978.00. In addition the plant com-

prises more than a score of colony houses, a long laying house and a complete equipment.

Apiary and Insectary.—Erected 1913. Cost \$1,936.30. Houses laboratories for entomology and beekeeping. Cupola is fitted with modern insect trap to aid in study of winged insects.

Barns.—Brick barn, 60 by 96 feet, cost \$7,500.00; dairy barn, cost \$8,000.00; sheep barn, \$8,000.00; hog barn, \$1,000.00; veterinary barn, cost \$2,402.35.

### REQUIREMENTS FOR ADMISSION

All persons who desire to enter any School of the College should make application to the Registrar as early as possible before the opening of the first or second semester. Those who desire to be admitted by certificate should make application as soon as possible after their graduation from the high school. To all applicants a blank will be furnished which they are expected to fill out and file with the Registrar in advance of entrance. This certificate must give in detail, concerning each subject which the applicant has studied in the school, the length of time in weeks, the number of recitations per week, and the grade or mark indicating his proficiency. Upon receipt of this certificate a permit to register will be sent the applicant by the Registrar in advance of his coming in September. This will greatly facilitate the work of entrance. The student will present this permit at the registration room and will not be compelled to wait his turn to meet the Entrance Committee.

### Degree Courses

Applicants for admission to the degree courses should be 16 years of age or over and of good moral character. They will be required to present 15 units of entrance credits for admission to the Freshman class. The 15 units required are distributed in the most advantageous way for admission to the various College courses in the Schools of Agriculture, Engineering, Home Economics, Science and Literature, Education, Commerce and Marketing, and Veterinary Medicine, as indicated in the following table. One who offers 14 such units will also be admitted as a

Freshman, but will be conditioned in 1 unit. Such deficiency must be made up by the end of the second year that the student is in attendance.

	Agri- culture	Engin- eering	Home Econ- omics	Science and Literature	Edu- cation	Com- merce and Mar- keting	Veter- inary Medi- cine
English Algebra Plane Geometry Solid Geometry *Science **Foreign Language Social Science Inc. History  ***Electives Total	3 1 1 1 1 7 8 15	2½ 1½ 1 ½ 1 1 1 1 7½ 7½ 7½ 7½ 15	3 1 1 1 1 7 8 15	3 1½ 1 1 1 1 7½ 7½ 7½ 15	3 1 1 1 1 7 8 15	3 1 1 1 1 7 8 15	3 1 1 1 1 7 8 15

<sup>\*</sup>Physics required in Agriculture, Engineering and Science and Literature

courses.
\*\*German or Latin required in Science and Literature course. German pre-

ferred in the Engineering course.

\*\*\*To make up the total of 15 units the applicant may use as electives any work satisfactorily completed in high school. A unit is defined to be the work done in an accredited high school or academy in five recitation periods a week for one school year.

### Deficiencies

The courses in the Secondary School of the A. and M. College, offered in connection with the College, give every needed opportunity for students of the College to make up anything lacking in their preparation for entrance. All such entrance deficiencies must be made up by the end of the second year that the student is in attendance.

### Advanced Credit

Applicants from other institutions of approved standing who offer collegiate courses or professional courses in excess of the requirements for admission will be assigned such advanced standing as may be determined by the Committee on Advanced Standing.

### Special Students

Persons of mature age who do not possess all the requirements for admission and are not candidates for a degree will be permitted to enter any of the courses in the different Schools upon giving satisfactory evidence to the Dean of that School that they are prepared to take advantageously the subjects which they desire. If they desire to take advanced subjects, such as are offered in the Junior and Senior years, they must show special preparation or special necessity for such courses. Persons applying for admission on the above basis are required to present a detailed statement of their preparatory work at the time of their admission.

### Secondary School of the A. and M. College

The minimum age limit is 14 years. Applicants for admission living in towns having high schools must be 16 years of age. Other applicants must pass a satisfactory examination in reading, spelling, penmanship, geography, United States history, grammar and arithmetic.

### **Business Course**

Applicants for admission to the Business Course must have completed eighth grade subjects and be 18 years of age.

### REQUIREMENTS FOR GRADUATION

### Leading to Bachelor's Degree

In all of the four-year courses of study leading to a degree, a student must earn 128 credits, exclusive of any credits given for military science and physical training, before being eligible for a degree. A credit is one hour of theoretical work carried for one semester, three hours laboratory work being equivalent to one credit. Students are expected, as a rule, to carry 16 hours' credit work per semester, but by special arrangement with adviser and Dean the number taken may be varied from 12 to 20 credits per semester.

### Requirements for Master's Degree

- 1. Conditions of Candidacy.—A graduate of any school of this College, or of another institution in which the requirements for bachelor's degree are equivalent, may become a candidate for the corresponding master's degree by making application on a blank provided for the purpose.
- 2. Applications.—An application in outlined form must be submitted for approval to the Committee on Graduate Courses not later than October 15.

The outline shall be submitted in triplicate to the Committee on Graduate Courses, signed by the major professor, showing the nature and amount of major and minor work in theory and practice hours and equivalent credit hours.

On the reverse side of said outline, the major and minor subjects (if not designated in the College catalog) shall be given in detail, including all topics to be considered. Subjects in minor work shall be approved, with signature, by heads of departments concerned.

- 3. Amount of Work.—The minimum requirement shall be not less than 15 credit hours per week throughout one year.
- 4. Nature of Work.—The work shall be arranged into major and minor subjects; at least one-half of the work shall be in the major subject. The remainder of the work shall be done in other departments than that in which the major work is done.
- 5: Residence.—One semester's residence work is required of every candidate. Graduates of this College may be permitted in special cases to obtain one semester's credit at any other approved institution.
- 6. Thesis.—A thesis upon some subject connected with the major study is required unless waived by the committee, upon recommendation of the major professor. The subject must be submitted for approval to the chairman of the Committee on Graduate Courses before October 15. The thesis must cover some line of original research work under the supervision of the major professor, and the thesis as a whole must be approved by the major professor and the Dean of the division.

Two typewritten copies of the thesis, in specified form, shall be deposited, one with the major professor, and one with the College librarian, on or before May 15.

- 7. Degrees.—The degrees offered are: Master of Science in Agriculture, M. S. Agr., and Master of Science in the respective branches of engineering, e. g., M. S. (C. E.), etc.
- 8. Fees.—Before receiving the degree, the candidate shall pay a diploma fee of \$10.00, and any unpaid laboratory fees.

# Professional Degrees in Engineering

A graduate of the School of Engineering who has been engaged in acceptable professional work for a period of not less than four years since graduation, who has been in responsible charge of such work for at least one year of this period, and shall present a satisfactory thesis, may be recommended to the Board of Regents for one of the following degrees: Mechanical Engineer (M. E.), Electrical Engineer (E. E.), Civil Engineer (C. E.), Architectural Engineer (A. E.).

A candidate for a professional degree must file with the Committee on Graduate Courses, at least one year before the granting of such degree, a detailed statement of his experience. If this record is approved, the committee will turn same over to the head of the department under whom the work for the desired degree most properly falls. The head of this department will then confer with the applicant in regard to the thesis and will require monthly reports from him thereafter as to his progress. Two bound copies of the thesis must be filed not later than April 1st of the year in which he proposes to qualify for the degree.

#### COST OF ATTENDANCE

#### Trust Fund

A fee of \$2.50 will be collected at the beginning of each semester to cover actual expenses incident to breakage and use of materials in the various laboratories of the College. Any unexpended balance will be returned to the student.

#### Board and Rooms

Furnished rooms in the Woman's Building or in the Boys' Dormitory (including heat, light, water, etc., two students occupying each room) are provided at \$3.00 per month each, payable in advance. Application for dormitory accommodations must be made in writing. Those occupying rooms in dormitories must furnish towels, bed linen and covers. The two dormitory buildings contain bathrooms and all necessary facilities, are thoroughly sanitary, heated by steam and lighted with electricity.

Board in the A. and M. College Dining Hall is provided at actual cost. The cost of such board is about \$3.25 per week, pay-

able in advance. The total cost of supplies and labor is prorated at the end of every month to students boarding in the dining hall.

Board with room in private families can be obtained for \$3.25 to \$4.50 per week. Furnished rooms, \$2.00 to \$5.00 per month, if two occupy the room.

# Other Expenses

The total cost of attending the A. and M. College courses embraces the items of board, books, clothing and minor incidental expenses of a personal character. These may be safely estimated at \$160.00 to \$200.00 for nine months. Sixty-three percent of the students materially reduce their expenses below the figures given by working in the several departments of the A. and M. College and in the City of Stillwater, and many earn all personal expenses.

# Amount Required to Begin

Those students of limited means desiring to enter the A. and M. College should have some \$75.00 available with which to bear the first items of personal expense and make sure of some months' consecutive study. This amount is estimated for young men to include:

Board and room, two months\$	36.00
Books, etc.,	8.00
Incidentals	5.00
Military uniform—hat, cap, shirt, coat, trousers and	
Ieggins, about	18.00
-	
Personal expenses\$	67.00

With such sum in hand or available, the industrious student may, by his own efforts, secure three or four months, or even a longer period, of study in the A. and M. College. The same estimates will apply to young women if cost of uniform be deducted. Extravagance in all forms is discouraged. Freshmen and Secondary School boys must supply themselves with gymnasium suits costing \$2.00. Girls of the Secondary School, Freshman and Sophomore classes must supply themselves with gymnasium suits costing \$6.00.

A senior division of the Reserve Officers Training Corps has been established under the rules of the War Department. This entitles Freshmen, Sophomores, Juniors and Seniors who take drill to receive from the Government, free of charge, a complete uniform, consisting of cap, shirt, coat, breeches, leggins and shoes.

In addition to the above, Juniors and Seniors who take the advanced course in military science will be paid at the rate of \$9.00 per month by the Government.

# Approved Rooming Houses

Comfortable and desirable homes in Stillwater are listed as "approved rooming houses" for male and female non-resident students by the Faculty Committee on Assignment to Rooms. Students are not permitted to room in other than approved rooming houses.

#### Advisers to Students

To bring about a closer relation between students and members of the Faculty and parents, and for the purpose of safeguarding every interest of the individual student, the A. and M. College has adopted an "advisory system" which applies to all students. A small number of students are assigned to each instructor, who is known as their adviser for the year, and whose duty it is to know each of them personally, and to meet them from time to time. The adviser endeavors to become familiar with the conditions surrounding his students. In many instances he selects studies suited to the student's need or adjusts the student to his work and surroundings. Parents should not hesitate to write to advisers or to the President concerning matters that may have to do with the students' comfort and progress in their studies.

#### Care of Health

The health of all students is a matter of chief concern to the officers of the A. and M. College. The rules require that all cases of illness be reported promptly. A responsible physician is employed who attends all students without charge in cases of illness

or injury received in the line of duty, except cases of major surgery. Sickrooms for the better accommodation of boys and girls suffering from illness are provided, without additional cost, in each of the dormitory buildings.

All students have access to the separate gymnasiums for boys and girls. Games and sports are encouraged for their mental relief and the physical relaxation afforded. These exercises, taken indoors and in the open air, followed by baths, and with the privilege of consultation on matters of personal health, afford valuable safeguards to the health of every student who attends the A. and M. College.

# Help

Students are employed on the farm, in the creamery, dining hall, the Printing Department and elsewhere, for which reasonable remuneration is allowed. This, in connection with other positions about the A. and M. College buildings and grounds, and such opportunities as are offered in the city, has enabled a very considerable number of students practically to make their own way through their college courses. The amount a student can earn depends almost entirely upon his thrift and energy, and the time he can spare from his studies. The rate of pay is 15 cents per hour for work faithfully performed. Skilled labor commands a better rate of pay—some lines of expert work netting the students 25 cents an hour. Many students are thus assisted and encouraged every year-the preference being given to those whose college work is meritorious. It must not be gathered from this that the A. and M. College engages to afford employment sufficient to enable every worthy young man to complete the course without other resources. With the growth of the institution has come an increased demand for this employment which it is impossible to meet in full. Yet very few students have been compelled to leave Coilege in recent years on account of inability to secure work.

#### GENERAL INFORMATION

The seat of the Oklahoma Agricultural and Mechanical College is Stillwater, in Payne County, a "college town" of 5,000 people, most beautifully and healthfully situated at an elevation

of 915 feet above sea level. Payne County was one of the five original counties of Oklahoma Territory and is named for David L. Payne, the noted pioneer, who first settled near the present site of the College. Stillwater citizens and students of the A. and M. College enjoy the advantages of electric light, telephones, free delivery of mail, a city water system, sewerage, and a very complete system of brick walks shaded continuously by trees. Stillwater is on the Santa Fe Railroad (Arkansas City and Pauls Valley branch). The main connections are at Guthrie, Pawnee, Shawnee, Cushing and Davenport.

#### Moral Influences

Eight leading churches are represented in Stillwater and the students are encouraged to attend and participate in their services. As a matter of fact, the Sunday schools and the young people's societies of the several churches in Stillwater are sustained very largely by the students from the A. and M. College.

A Young Men's Christian Association and a Young Women's Christian Association are actively engaged in the numerous and beneficial lines of work characteristic of these organizations among students. These student organizations are not merely helpful to their membership, but exert a wholesome influence on the moral life of the A. and M. College. Social gatherings and entertainments are made to contribute to the moral welfare of the students of both sexes, and these add to the address and composuuse of those who seek the helpful influences of this institution.

Beginning with the regular session of 1917-18, in September, 1917, a full-time Y. M. C. A. secretary will be employed.

# Grades and Reports

The semester grade is the average of the daily grade and the grades made in tests, and in making up the final grade for the semester, the semester grade shall count two-thirds and the final examination grade one-third. Reports showing the grades and standing of students are sent to parents and guardians at the end of each semester. Attention is particularly directed to these reports; they are the best indication of the work and standing of the student.

#### Theses

In some departments a thesis is required for graduation, and in other departments it is elective. Students intending to write theses must select the subject not later than the last week of the first semester, the subjects to be approved by the departments having charge of the work.

# Diploma

Each candidate for graduation in the four-year courses shall deposit with the Registrar \$2.50. Candidates for graduation in the Business Course and in the Short Course in Practical Agriculture shall deposit with the Registrar \$1.00 before the student is recommended for graduation.

# Library

The College library consists of all the books belonging to the College. The Experiment Station library is correlated with it. The library occupies five large rooms and an office in the Library Building. The first and largest room is used as a reference and readingroom, and contains all the general reference books, magazines, periodicals, etc. The other four rooms are used as stack rooms. The library is open twelve and one-half hours each day and three hours on Sunday. The library is classified according to the Dewey Decimal System, and indexed in a dictionary card catalog. The library is a depository for all Government publications. There are now 26,503 bound volumes in the library. There are over 90,000 unbound pamphlets, which are now being arranged and classified for quick reference work. In addition, the library possesses over 50,000 unbound periodicals, which are rapidly being bound. The library receives 490 of the leading newspapers and periodicals of the United States. Twelve of the large dailies of the United States are kept on the newspaper racks for the use of the students, and most of the magazines indexed in the Reader's Guide are on our shelves. Daily attendance records for the past year have run as high as 1,000.

Purpose.—It is the purpose of the Librarian not only to supplement the work of every department, but also to make the library the center of all literary activity of the College. Every effort is made to assist the students in the use of the reference books, catalogs and indexes, and to familiarize themselves with the best books and use of bibliographies.

Valuable Gifts.—The library has been enriched by the gift from the Carnegie Institution of Washington of all their publications, and also by the studies from the Rockefeller Institute of Medical Research. Each of these great institutions has placed the library on the "Omnia List". Other valuable gifts include several thousand periodicals and several hundred books.

Regulations.—Books may be drawn by all the officers and students of the College and by others having special permission. Books are drawn for a period of two weeks. General reference, reserve books, periodicals and dictionaries must be consulted in the readingroom, and not drawn from the library. Citizens and visitors, whether connected with the College or not, are invited to make free use of the reading and reference room, and assistance in reference work will gladly be given them.

Library Science Courses—Course A.—In connection with the English Department, a course in Elementary Library Science is given. This course does not aim to fit students for library positions of any kind, but to familiarize the students in the use of the library and general reference books in connection with their college work. Laboratory work is given in the library in connection with the lectures and recitations. This course is required of all Freshmen.

Course B.—This is a general course in Library Science, giving the student a deeper insight into the use of the library and helping him to find the material wanted in the quickest, most logical way. It includes a brief study of the Dewey Decimal Classification, the card catalog and other tools of the library. Much time is spent on the use of reference books, and some attention is given to library methods. This course is of special benefit to those contemplating high school teaching. This is a lecture course of one hour per week with some practice in the library. It carries with it one hour theory credit. It is optional with all classes and is given by the Librarian. Scheduled for Tuesday, sixth hour. Professor Broemel's room.

# Literary and Other Societies

General literary societies are always active among the students. The Philomathean, the Omega and the Alpha Societies enroll a large percent of the entire student body, and, in addition, a number of clubs and societies have been formed by students specializing in science, engineering, pedagogy, agriculture and domestic science for the purpose of supplementary work and investigation. The Athletic Association has charge of all local College sports, the "Tug-o'-War" and Field Day exercises, and of the interests of the institution in the interscholastic and intercollegiate meets. The Oratorical Association has charge of the representation of the A. and M. College in the preliminary intercollegiate oratorical contests.

#### Of Interest to Girls

About one-third of the students of the Oklahoma Agricultural and Mechanical College are young women. All courses are open to them except Veterinary Medicine.

The course in Home Economics is of great practical value to young women because it is carefully arranged to give science with practice in the best possible proportion and order.

In order to meet the demand for a more general course, the "Science and Literature" course has been established. This course will be found to be especially adapted to the needs of young women desiring higher education in literature, languages, history, etc., and offers training in music, elocution and domestic science.

A complete teacher-training course is offered by the School of Education to those who desire professional training for teaching in high schools and colleges. A State life certificate is awarded those graduating in this course.

# Athletics, Military Drill and Discipline

The constant purpose of the A. and M. College is to develop "sound minds in sound bodies" and to train the moral faculties. Clean sports and games on the field cultivate the mental and moral sides of the individual as well as the physical side, while affording needed occasion for relaxation and the repair of muscular and nerve tissues. Ball games and track athletics are encouraged by the A. and M. College authorities.

The Gymnasium for Men is under the supervision of the Physical Director. The exercises in the Women's Gymnasium are directed by competent lady instructors.

The State Interscholastic Track and Field Meet is held on the A. and M. College grounds annually, to which the schools of all sections of Oklahoma are invited.

Baseball and football are provided with suitable grounds, and tennis courts are at the disposal of students.

Military drill is given during the first two years of the College course for its physical effects, and as required by the Federal law establishing this and other similar colleges. The good results of this drill are quickly noticed in the improved health and carriage and deportment of those coming under its helpful influence. Young men, especially, need such training to give the erect carriage and strong physique that marks the man of military training.

A commissioned officer of the United States Army is assigned to duty regularly at the A. and M. College as Commandant of Cadets. Instruction in military science is provided for all male students, and infantry drill is given in the field movements and under arms. Arms, accounterments and ammunition have been supplied by the Federal Government. The military discipline is mild but firm, and cultivates habits of punctuality, alertness and the sense of personal responsibility. A rifle club organized by volunteers is an interesting feature of military training.

The Federal measure establishing the Reserve Officers Training Corps provides free uniforms and a salary of \$9.00 a month to all cadets enlisting in the corps.

#### Honor Students

The honor students for the session, 1915-16, were as follows:

School of Agriculture, Harold R. Naylor, 95 5-11%.

School of Engineering, Walter R. Marsh, 96 17-19%.

School of Home Economics, Elizabeth Denton, 94 5-21%.

School of Science and Literature, Jesse J. Canfield, 95 1-7%.

School of Education, Fred McCarrell, 95 6-7%.

School of Commerce and Marketing, W. Carl Weaver, 90 1-4%.

School of Veterinary Medicine, H. C. Boyd, 91 6-17%.

George W. Stiles, of the class of 1900, offers a \$25.00 prize to the student doing work along bacteriological lines for the best thesis on some phase of rural sanitation. The work is to be along original lines and of such merit as to justify recognition in awarding the prize.

The \$5.00 prize offered by the English Department was won by E. Ray Skinner. George Ransom won the Otey prize, given by Financial Secretary M. J. Otey, to the student who overcame the most serious difficulties in his college career.

# Prizes in Public Speaking Contests

# Old Line Oratorical-

First Prize—\$25.00, Bishop Clothing Company, Stillwater. Second Prize—\$10.00, Rexall Drug Company, Stillwater.

# Intercollegiate Peace Oratorical-

First Prize—\$25.00 gold watch, Holt Jewelry and Optical Company, Stillwater.

Second Prize-\$15.00, Smith's studio, Stillwater.

# Intercollegiate Prohibition Oratorical—

First Prize—\$25.00, Searcy's grocery, Stillwater. Second Prize—\$10.00, First National Bank, Stillwater.

# Intercollegiate Debate-

First Prize—\$15.00, Peck Bros., and other alumni. Second Prize—\$10.00, Mr. M. J. Otey, Stillwater. Third Prize—\$5.00, Dr. F. B. Olentine, Chicago.

# Freshman Declamation-

First Prize—\$10.00, Katz department store, Stillwater. Second Prize—\$5.00, Tiger Drug and Book Company, Stillwater.

# Freshman Extempore Speaking—

First Prize—\$10.00, Katz department store, Stillwater. Second Prize—\$5.00, Stillwater Furniture Company, Stillwater.

Students who make the intercollegiate debating teams are awarded gold medals by the College, and are eligible for membership in the Pi Kappa Delta honorary fraternity.

# SCHOOLS OF INSTRUCTION

The schools of instruction are planned and grouped to suit the natural needs and desires of the students in attendance at this institution, as indicated by the experience of several years past. Formerly the studies offered by the several departments of the College were grouped in "Divisions". As a result of recent developments and change these are now known as "Schools" and their subdivisions are termed "Courses", thus the School of Engineering has its Electrical Engineering course, Mechanical Engineering course, etc.

Under the present organization the studies of the College are grouped into the following Schools:

- 1. The School of Agriculture.
- 2. The School of Engineering.
- 3. The School of Home Economics.
- 4. The School of Science and Literature.
- 5. The School of Education.
- 6. The School of Commerce and Marketing.
- 7. The School of Veterinary Medicine.

# THE SCHOOL OF AGRICULTURE

W. L. CARLYLE, Dean

#### COURSES OF INSTRUCTION

The following courses of study, designed to meet the requirements of students of the various classes, have been arranged by the school:

# General Course in Agriculture

This course of study leads to the degree of Bachelor of Science (Agriculture), and offers scientific training in agricultural bacteriology, agricultural chemistry, agricultural economics, agricultural education, agricultural engineering, agricultural journalism, agronomy, animal husbandry, dairying, horticulture, entomology, poultry husbandry and veterinary science. In addition to these specific subjects relating directly to agriculture, it embraces a general training in chemistry, botany, bacteriology, zoology, English and other branches which have an application in agriculture and which are designed to give a broad, general education for the man who wishes to devote his time and talent to agricultural pursuits, investigations or teaching.

The field is so broad, however, that it is impossible for any student in four years to take advantage of all the lines of work offered. As will be seen in the curriculum of studies, the work in the Freshman, Sophomore and Junior years is very much the same for all students, giving a maximum of the necessary fundamental studies. The Senior year, however, gives much liberty for selection and for elective studies in the particular branch of agricultural science that the student may be interested in.

# Laboratory Exercises and Practice Work

It has been found that the students in the regular four years course in agriculture divide themselves about equally into two classes on the basis of their future work. Those planning to return to the farm or to engage in demonstration work are desirous of more practice work in all departments, while those desiring to take advanced studies with the view of becoming instructors and research specialists, require more technical training in the classroom and laboratory.

In order to meet in part at least the demands of these two legitimate classes of students, there will be offered an opportunity for those wishing the more practical training to use at least a part of the required laboratory periods in practical work on the farm. In other words, work on the farm, in the Experiment Station, in the creamery, the orchard, the garden, the stock barns and the poultry plant for at least two half days each week may be substituted for required laboratory work. The labor will be paid for at the rate of 15 cents per hour. The labor will be performed under supervision, and as soon as a student has become proficient in any department he will receive due credit for the practice work in that department and will be passed on to other departments. Credits may be made in this manner during the summer months by working on the College farm and other departments.

Four credits may be allowed for this practice work during each semester of the four years course. This credit is to be arranged for in consultation between the heads of departments and the dean's office, to be aproved by the President.

This practice laboratory work is entirely optional with the student. Work must be done in a satisfactory manner or credit will not be given, and no student will be continued in practice work who is not making a proper use of the time spent in the department.

# Short Course in Practical Agriculture

This course is designed for young men from the farms of Oklahoma who have not the time nor the inclination to take a regular course in the high schools of the State to be followed by a four-year course in scientific agriculture in this institution, yet who desire a training in the practical application of the science of agriculture to the business of farming. It provides a course of study that will give the student a maximum of the agricultural studies relating to farm and livestock work and in addition gives as much of the general studies as may be most useful in training

young men to become leaders in their chosen calling on the farms of the State or as teachers of agricultural subjects in the rural schools of the State if the essential preparatory studies have been taken before entering the course.

The course of study includes work in agricultural chemistry, agricultural economics, agricultural engineering, field crops, soils, animal husbandry, including stock judging, and a study of the feeding and care of animals, dairying, horticulture, farm management, poultry husbandry, animal diseases and entomology.

The outline of studies is such as will impart the greatest amount of directly useful knowledge that can be acquired in a brief length of time. The course of study includes three winters' work, beginning November 11, 1917, and closing February 23, 1918.

For further details and illustrated circular describing this course, application should be made to the Dean of Agriculture, Stillwater, Oklahoma.

# Farmers' Course in Agriculture

The Farmers' Course in Agriculture is designed to meet the growing demand on the part of the busy farmer who is actually engaged in the work on his farm and who cannot avail himself of a college course, yet desires the latest information on the various phases of his work on his farm. The course will consist of addresses, demonstrations and exercises covering a period of one week, designed to give busy farmers the most useful instruction and practice in the various phases of field crop culture, stock feeding and management, horticulture, dairying and kindred subjects in the shortest possible time and at a season when they can be away from home for a brief period.

The course will be held in January 1918, and is given under direction of the Extension Division, assisted by the teaching staff and Experiment Station staff of the A. and M. College, assisted by other speakers and specialists. Programs may be had upon application to the Director of Extension, A. and M. College, Stillwater, Oklahoma.

#### TERMS OF ADMISSION

#### General Course in Agriculture

The requirements for admission to this course are stated in terms of units in common with all other regular courses in the College. The term "unit" means the equivalent of five recitations a week for one year in one branch of study in the Secondary School. Fifteen units are required for admission, an allowance of one credit being made, however, where an applicant has completed fourteen units of work in an accredited high school. The fifteenth unit may be made up from the Secondary School studies offered in the College.

Applicants will be required to present three units in English; one in social science, including history; one in physics; two in mathematics, which shall be made up of one unit in algebra and one in plane geometry; three academic units, including foreign language, and five additional units shall be elective from vocational, science, or other subjects.

# Short Course in Practical Agriculture and Six Weeks' Course in Dairying

Students in this course must be at least sixteen years of age and have a good common school education. No entrance examinations are required.

#### GENERAL COURSE IN AGRICULTURE

The following outline of study represents the required and elective work in the School of Agriculture. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits, exclusive

of any credits given in military science and physical education.

The thesis or substitute work approved by the dean of the school must represent some phase of the student's work in his major study, for which a maximum of 4 credits will be given. Before graduation every student in agriculture must have had at least six months of actual farm experience satisfactory to the dean of the school.

In the outline below, figures without parenthesis indicate hours

of classwork, in parenthesis hours of laboratory work.

#### General Course

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER		
Hrs.	Cr.		Hrs.	Cr.
Eng. 101, College 3	3	Eng. 102, College 3		
	4 1-3	Chem. 102, Inorganic 2		3 1-3
Agron. 101, Field Crops 2 (4)	3 1-3	Hort. 104, Vegetable Gar-		
A. H. 101, Market Types 1 (4)	2-1-3	dening 2	(2)	2 2-3
Pub. Spk. 123, Essentials. 1 (2)	1 2-3	Bot. 104, General 2	(4)	3 1-3
Military Science(3)	1	Dairy 102, Elements of		
Physical Education (3)		Dairying		3 1-3
		Carpentry		
		Military Science	(3)	1
	6	Physical Education	(3)	1

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER	
	Irs.	Cr.		Cr.
Eng. 203, News Writing 2 Chem. 207, Qualitative		2	Chem. 206, Quantitative Agricultural Chemistry 2 (6) 4	
Analysis 1 Chem. 205, Organic 2		2	A. H. 202, Breeds of	
Chem. 205, Organic 2	(3)	3	Livestock 2 (3) 3	
Hort. 201, Fruit Growing 2	(4)	3 1-3		2-3
Zool. 207, General 2 Farm Engr. 201, Farm	(4)	3 1-3	Bact. 310, General	1-3
Mechanics	(3)	2	Military Science	
Shop 205, Agricultural	. ,		(0)	
Forging	(3)	1		
Military Science	(3)	1		

#### Agronomy Course

#### JUNIOR YEAR

FIRST SEMESTER			SECOND SEMESTER	
Agron. 303, Forage Crops. 2 Bot. 303, Genetics	3	3	Agron. 302, Soil Fertility 3 (6) Hort. 304, Plant Breeding 3 Agron. 304, Farm Accounts	3

#### SENIOR YEAR

SENIOR YEAR						
FIRST SEMESTER		SECOND SEMESTER				
Hrs.	Cr.	Hrs.	Cr.			
Agron. 401, Farm Manage- ment 2 (4) Agron. 409, Advanced	3 1-3	Agron. 404, Crop Improvement 1 (4)	2 1-3			
Crops 2 (4)	3 1-3	Agron. 424, Advanced Farm Management 1 (4)	2 1-3			
Agron, 405, Advanced		Agri. 402, College &	1			
Soils	1 8 2-3	Agri. 402, College & Station Work 1 Agri. 404, Bulletin Review 1 Agron. 408, Seminar 1 Electives	1 2-3 1 8 2-3			
Animal Husbandry Course						
	JUNIOR					
FIRST SEMESTER		SECOND SEMESTER				
Hrs	Cr.	Hrs.	Cr.			
A. H. 301, Livestock		A. H. 302, Livestock				
Record Work	1 2-3 2 2-3	Judging	2 1-3			
Bot. 303, Genetics	3	Nutrition 3	3			
Poultry 305, Farm Poultry 2 (4)	3 1-3	Vet. Med. 310, Animal	000			
Electives	6 1-3	Vet. Med. 310, Animal Diseases 2 (2) Agron. 302, Soil Fertility. 3 (6) Electives	2 2-3			
	SENIOR		u			
FIRST SEMESTER		SECOND SEMESTER				
Hrs.	Cr.	Hrs.	Cr.			
A. H. 401, Livestock		A. H. 404, Animal				
Selection	3		3			
A. H. 409, Animal Breeding	3	A. H. 408, Dairy Cattle— Feeding, Management				
Breeding	3 1-3	and Judging 2 (2) Agri. 404, Bulletin Review 1 (2) Agri. 402, College and Station Work	2 2-3			
Management	6 2-3	Agri. 402, College and	1 2-5			
		Station Work	1 1.3			
		A. H. 406, Practicum (4) Electives	6 1-3			
D	airying	Course				
	JUNIOR	YEAR				
FIRST SEMESTER		SECOND SEMESTER				
Driver 202 Testing Mills	Cr.	Dairy 304, Factory  Hrs.	Cr.			
Dairy 303, Testing Milk and Its Products 1 (6)	3	Operation 2 (8)	4 2-3			
Farm Engr. 303, Farm	2 1 2	Operation	2			
Motors	3 1-3	Nutrition	8 1-3			
Agron. 303, Forage Crops. 2 (4) Poultry 305, Farm Poultry 2 (4)	3 1-3					
	3 1-3					
	SENIOR	YEAR				
FIRST SEMESTER		SECOND SEMESTER	-			
Driver 405 Changemaking 1 (6)	Cr.	Dairy 404, Market Milk and	Cr.			
Dairy 405, Cheesemaking 1 (6) Dairy 407, Milk Production 3 A. H. 409, Animal	3	Dairy Inspection 2 (3)	3			
A. H. 409, Animal		Dairy 406, Dairy Seminar 1 Agri. 402, College and Station Work	1			
Breeding 3 Bact. 311, Dairy	3	Station Work 1	1			
Bacteriology 2 (4)		Agri. 404, Bulletin Review 1 (2)	1 2-3			
Electives	3 1-3	Electives	9 1-3			

#### Horticultural Course

#### JUNIOR YEAR

FIRST SEMESTER	R		SECOND SEMESTE	ER		
	Hrs.	Cr.		H	Irs.	Cr.
Pomology	2 (4)	3 1-3	Hort. 306, Nursery Practice	2	(2)	2 2-3
Handling of By-pro	1 (2)	1 2-3	Bot. 204, Plant Physiology Agron. 302, Soil		(2)	2 2-3
Bot. 303, Genetics	3	3	Fertility	3	(6)	5 2 2-3
Motors Poultry 305, Farm Poultry Electives	2 (4) 2 (4)	3 1-3 3 1-3 2	DICCIVES			2 4-3
		SENIOR	YEAR			
FIRST SEMESTER	2		SECOND SEMESTE	R		
	Hrs.	Cr.		7.1	Irs.	Cr.
	1115.	CI.		- 11	LIS.	CI.
Hort. 401, Commercial			Hort. 402, Landscape			
Pomology	2 (2)	2 2-3	Gardening			2 2-3
Pomology Hort. 405, Forestry Bot. 305, Plant Pathology.	2 (2)					
Pomology Hort, 405, Forestry Bot. 305, Plant Pathology. Econ. 201, Elements of Economics	2 (2) 3 2 (4)	2 2-3 3 3 1-3	Gardening	2		
Pomology	2 (2) 3 2 (4)	2 2-3 3 3 1-3	Gardening	2		
Pomology Hort, 405, Forestry Bot. 305, Plant Pathology. Econ. 201, Elements of Economics	2 (2) 3 2 (4)	2 2-3 3 3 1-3	Gardening	3 1	(2)	2 2-3

# DEPARTMENT OF AGRONOMY

M. A. BEESON, Professor
Adrian Daane, Assistant Professor
Wallace Macfarlane, Assistant Professor
Roy Hore, Foreman

The course in agronomy is designed to familiarize the student with the principles underlying productive soils, plant growth and farm management. It offers practical training in these modern fields of science, preparing young men to successfully solve the problems of farm life and fitting them for educational and research work.

The subject matter of these courses comprises the most recent information and experimental data. While the conditions in different sections of Oklahoma are given special consideration, yet the instruction is not intended to be limited geographically.

The courses of instruction in this department are coordinated with the courses in animal husbandry, dairy husbandry, agricultural engineering, poultry husbandry, horticulture and entomology. By this arrangement and the electives allowed, the student will be able to get a comprehensive knowledge of the three large branches of agricultural science—the soil, the plant and the animal. And, too, the student has an opportunity to get either a

general education to fit him more particularly for general farming and extension work, or he may specialize in any particular division of the Agronomy Department, as soils, crops and farm management.

The work in the department is two-fold: First, to fit young men to successfully solve problems of soils, crops and management, which are an integral part of every farmer's experience; second, to fit students to fill creditably position in agricultural colleges, experiment stations, as investigators in Government and State experiment work, high schools, farm managers and extension workers for colleges and railroads.

There is a constantly increasing demand for men trained in soils, crops and principles of farm management, and every year the department is asked to recommend men for such desirable positions in colleges and experiment stations; instructors in agriculture in high schools; investigators in Government and State experiment work, farm managers and extension workers.

The Station farm used by the Department of Agronomy consists of 160 acres of medium rolling land, well situated for experiment and demonstration work. It is well equipped with all kinds of farm machinery necessary in crop production.

The general field and experiment plats of the Experiment Station, used for breeding and testing farm crops and for conducting experiments in methods of soil management, afford the student excellent opportunities for study and investigation.

The large, well equipped laboratory for soil physics and soil fertility work is maintained for the regular use of students.

A research laboratory is well supplied with necessary apparatus for the use of the instructors and advanced students in doing research work.

The crops laboratory is well equipped with material and specimens for a detailed study of the different cereals, forage and fiber crops.

The courses in farm management are designed to correlate the information obtained in other courses so that the student may understand the principles involved in organizing and conducting a farm as a profitable business. Records of 1,000 Oklahoma farms are available for use in the farm management course.

The following is a detailed description of the courses offered in lecture rooms and laboratories:

# **SUBJECTS**

101 Field Crops. Class 2 hours, laboratory 4 hours. Credit 31/3.

A study of the characteristics, adaptation, preparation of the seedbed, culture and uses of the various cereal crops and varieties of cotton adapted to Oklahoma conditions. The laboratory work is devoted largely to grain judging and a study of the various cereal grains.

204 Soils. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Elementary Physics.

A general introductory course dealing with the origin, formation, classification and physical properties of soils. Particular emphasis is placed upon the effect of soil management on moisture, drainage, aeration, heat, erosion and alkali.

302 Soil Fertility. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: Chem. 206.

The relation of the plant to the soil. Influence of the plant on the natural fertility of the soil. Profitable methods of conserving fertility. Effect of different systems of farming upon the fertility and productiveness of soils. Relation of micro-organisms to fertility. Special emphasis given to fertilizer requirements of Oklahoma soils.

303 Forage Crops. Class 2 hours, laboratory 4 hours. Credit 31/3.

A study of the history, development, growth, distribution, culture and uses of the forage and fiber crops. Annual and perennial grasses and forage crops, including legumes, cereals and sorghums, are studied with special reference to their culture, adaptation, production and uses. In the laboratory a study is made of the different seeds with special reference to their identification, quality and purity.

304 Farm Accounts. Class 1 hour, laboratory 2 hours. Credit 13/3.

Farm inventories, stock and crop account; complete farm accounts. Special emphasis is given to the interpretation of the accounts and their application to the organization and management of the farm.

401 Farm Management. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Agron. 101, 302, 202.

The purpose of this course is to assemble and correlate the principles involved in the successful management of a farm. Study is made of points to be considered in the selection of the farm, types of farming, planning and arrangement of the farmstead, the fields and crop rotations; of the cost of producing farm products. The relation of the size of farm to profits; the relation of livestock to crop production and maintenance of permanent agriculture receives consideration.

Text: Farm Management, Warren,

404 Crop Improvement. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Agron. 101, 302.

This is an advanced course in cereal and forage crops dealing with factors affecting management, improvement and breeding. The laboratory is partly devoted to the collection, reading and classification of material concerning cereal and forage crop improvement. As soon as conditions in the spring permit the laboratory work will consist chiefly of actual field work on the principal crops that are being improved on the Station farm.

405 Advanced Soils. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Agron. 302.

Physical or chemical study of special soils in which the student is especially interested. Centrifugal analysis; time and depth of cultivation; moisture and temperature; surface washing; prevention; determination of limiting elements of plant food on the home farm; effect of various fertilizers, as determined by pot and field experiments. Study of fertility experiments at other Stations.

407 Seminar. Class 1 hour. Credit 1.

Reports, discussions and papers will be called for on literature and scientific research along agronomic lines.

408 Seminar. Class 1 hour. Credit 1. Continuation of Agron. 407.

409 Advanced Crops. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Agron. 101, 302.

This course takes up more advanced work in the production of the important crops throughout the United States. Emphasis will also be placed on more detailed study of the various plants that go to make up the cereal and forage crops of the United States.

410 Normal Course in Agronomy. Class 2 hours, laboratory 4 hours. Credit 31/3.

This course is designed to prepare students and teachers for teaching the fundamental principles underlying soils, crops and farm management. The subject of seedbed preparation, how to maintain soil fertility and terracing; seed testing, planting, cultural methods and harvesting of Oklahoma crops; crop rotation, organization and management of a farm are considered. It is the purpose of this course to give such practical lessons as the teacher may be able to use in the rural, high and normal schools of Oklahoma in correlating the courses in agriculture with actual farm operations in the community. The lessons are arranged as far as possible in seasonal sequence.

423 Commercial Grades and Distribution of Farm Crops. Class 1 hour, laboratory 4 hours. Credit 21/3.

Study is made of the methods of inspecting, grading and the importance of standard grades. Storing, elevators and distribution of farm crops are given special attention. In the laboratory a study is made of commercial grades of corn, wheat, oats and hay, and actual experience in grading and moisture determination.

424 Advanced Farm Management. Class 1 hour, laboratory 4 hours. Credit 2½.

Prerequisite: Agron. 401.

Further study of organization and field management, and a study of the actual farms over the State, noting the arrangement of fields, and obtaining data on the farm, including labor, income and cost of production.

# DEPARTMENT OF ANIMAL HUSBANDRY

W. L. FOWLER, Professor D. A. Spencer, Assistant Professor W. L. BLIZZARD, Assistant Professor

The Department of Animal Husbandry gives instruction in all lines of practical and theoretical work which deal with judging, selecting, breeding, feeding, development, care and management of the various market and breed types of farm animals. The livestock industry in Oklahoma is the most important industry in the State, and for this reason the department is attempting to supply adequate instruction to meet the demands for work of this character.

# Equipment

The equipment in the form of flocks and herds, barns and outbuildings, judging pavilion, land and lots is rather complete. There has been a decided improvement both in quality and number in the herds and flocks during the last eighteen months. The number of good animals has been more than doubled. The State and Government recently spent about \$15,000.00 for the highest grade of registered horses, cattle, sheep and swine. The College has had a number of good animals from year to year for a long time.

The books in the libraries of the College, Experiment Station and department assist the students greatly in securing authentic information about livestock affairs. Special effort has been made to secure the most complete list of herdbooks and animal husbandry reference literature of any school in the South. The material at hand enables students to become specialists in many lines of the animal industry.

#### Courses

Judging and selection is one of the main features of the livestock work. The instruction is given with the idea that a great deal of good practice makes a proficient judge. Much time is given to work with the animals at the barns and in the judging pavilion. The score card method is used at first. In this way every point that affects the value of the animal is discussed in detail. Different breeds and types have different score cards, and by the use of all these cards students become skillful in judging the various breeds and types. Comparative judging is introduced as soon as the student has become proficient in the use of the score card. The comparative system consists in placing a class of animals in order of merit. Three or four or more animals are used as a class. Fifty percent is given to perfect placing and 50% for correct reason for placing. The Senior and postgraduate students are trained in judging so that they may, upon completing the course, assist in judging at the various county and State fairs.

Breeding, feeding and management are important courses of the instruction. Several breeding experiments are in progress at the Experiment Station. Students work out the details of the experiments and thereby become acquainted with the fundamental principles governing this science. Senior students are required to spend four hours each week throughout the year in feeding the hundreds of head of livestock at the College. The feeding work is carefully supervised by the best trained instructors and herdsmen.

Livestock management is one of the principal courses on the schedule. Students are taught that good management is more necessary than theories and fancies.

The main aim of the work given the student is to train him to fill some of the fields in which there is a great demand. A combination of college training and practical experience works well in making the best men. Colleges and experiment stations, Government agencies, farmers, merchants and all commercial agencies that buy and sell the farmer's produce, need men trained as the College is doing.

#### Beef Cattle

The beef cattle section of the Animal Husbandry Department is represented by three breeds, the Hereford, Shorthorn and Angus. Good representatives of each breed are maintained, and the course of study is so arranged as to give the student practical

instruction in selection, feeding, breeding, marketing, care and management. In addition to the breeding herd, the College maintains a steer herd. It is maintained because it is much easier to keep steers in high condition throughout the year, as there is a tendency to make non-breeders of breeding cattle by keeping them in the high condition required for the best instruction work. The recent winnings of the cattle show that the present equipment is exceedingly good.

# Dairy Cattle

The livestock equipment in the dairy section consists of registered Jerseys and Holstein-Friesians of high quality. Some of them produce as much milk and butterfat as any in the State. Daily records of about forty pounds of milk and two pounds of butterfat for about six mouths are common among the animals of the Rose Fern Lad Jersey family. Yearly records are kept in every case. It is planned to have one other breed well represented in the College herd before another year has passed. There has been a larger increase in value per head of dairy cattle in Oklahoma during the past year than any other class of livestock. More attention will be given to selecting and producing dairy cattle. Numerous lots and pasture land of several hundred acres is used in the outdoor management of the herd.

#### Horses

The horse section of the Animal Husbandry Department is represented by two breeds. Among these are good representatives of the Percheron and Standard Bred. In the collection of Percheron mares some excellent specimens are found. The Standard Breds are also represented by good individuals. This collection of horses was established some time ago, and with the individuals that have been added to it gives the student an excellent opportunity to receive some real practical work with horses. The most recent addition to this collection of horses is an outstanding good Percheron stallion.

# Sheep

The equipment for sheep consists of a barn and two silos, valued at \$2,500.00, besides several moderate sized pasture fields. The breeding flocks total about one hundred select individuals.

All sheep are owned by the Experiment Station and are used in the cross-breeding experiment that was started in 1909. Purebred flocks of Shropshires, Dorsets, American Merinos and Rambouillets are maintained and afford excellent material for instruction in the types and breeds of sheep in connection with the work in practical sheep judging. Thorough courses are offered in the study of market types and breed types of sheep, together with special sheep selection, production and management.

#### Swine

The collection of swine outnumbers that of any other section of the Animal Husbandry Division. Several breeds are represented. There are more Duroc Jerseys than any other breed. A number of Poland Chinas, Berkshires and Hampshires are kept. About fifty grade hogs are used, mainly for experimental purposes. In all, the number of swine on hand ranges from 175 to 200.

#### **SUBJECTS**

101 Market Types of Livestock. Class 1 hour, practice in judging 4 hours. Credit 2½.

This course consists of a study of the market types, classes and grades of horses, cattle, sheep and swine.

Text: Types and Market Classes of Livestock, Vaughn.

202 Breeds of Livestock. Class 2 hours, practice 3 hours. Credit 3.

Characteristics of each breed of horses, cattle, sheep, swine and jacks are considered at length. Each breed is discussed with reference to its origin, history, development and adaptation to American conditions. Much emphasis is put on the practical work in judging representatives of the various breeds according to the standards set by the show ring.

Text: Types and Breeds of Farm Animals, Plumb.

301 Livestock Record Work. Class 1 hour, laboratory 2 hours. Credit 1%.

Prerequisite: A. H. 101, 202.

A study of the systems of livestock registration, the use of herdbooks, the tracing of pedigrees and the leading blood lines of horses, cattle, sheep and swine.

Text: Herd Record Books.

302 Livestock Judging. Class 1 hour, practice in judging 4 hours. Credit 21/3.

Prerequisite: A. H. 101, 202.

A practical course aimed to train the student to become proficient in livestock judging. The first part of the work consists of the use of the score card as applied to the different types and breeds. The major portion of the work is done by the method of comparative judging, using rings of from three to five animals.

Text: Judging Farm Animals, Plumb.

306 Animal Nutrition. Class 3 hours. Credit 3.

Principles of animal nutrition; composition and digestibility of various feeds; balanced rations; economical feeding of animals for various purposes.

Text: Feeds and Feeding, Henry and others.

401 Livestock Selection. Class 1 hour, practice in judging 6 hours. Credit 3.

Prerequisite: A. H. 101, 202, 302.

Required of students who are candidates for judging teams.

This course deals with the judging of market classes as well as the different breeds of purebred stock. During the work of the term occasional trips are made to the best livestock farms of the State where the students have an opportunity to judge and to observe the management of herds and flocks. Students are urged to attend county and State fairs to observe the judging of livestock.

Text: Assigned references.

404 Animal Production. Class 3 hours. Credit 3.

Prerequisite: A. H. 101, 202, 306.

Studies of the most practical and scientific methods of producing, feeding and marketing livestock.

Text: Productive Horse Husbandry, Gay; Productive Swine Husbandry, Day; Sheep Farming, Craig.

406 Practicums—Practice in Feeding and Handling Livestock. Laboratory 4 hours. Credit 1½.

Prerequisite: A. H. 305, 306.

Practical feeding and management of horses, beef cattle, dairy cattle, sheep and swine is given in the barns, and each student is required to do the scheduled amount of this kind of work. Drill is given in grooming, feeding, care, management, fitting and training for show and exhibition purposes. The aim of the course is to aid the student to become a thoroughly practical and expert stockman.

408 Dairy Cattle Feeding, Management and Judging. Class 2 hours, practice work in judging 2 hours. Credit 23/3.

A special course for students in dairying.

409 Animal Breeding. Class 3 hours. Credit 3.

Prerequisite: Bot. 202 (genetics), A. H. 101, 301.

Required of Seniors in animal husbandry and dairying.

A study of the principles of animal breeding and their practical application. Special emphasis is laid upon the study of heredity and its control with reference to livestock improvement.

Text: Principles of Breeding, Davenport.

#### DEPARTMENT OF DAIRYING

A. C. BAER, Professor
C. A. BURNS, Assistant Professor
C. P. UNWIN, Foreman of Factory

The dairy industry is making rapid progress in Oklahoma. The State, however, does not produce enough dairy products to support the home demand. Much butter is still made on the farms due to a lack of profitable market for butterfat in many parts of the State. The general quality of dairy products is below that of many other States. The production of a better quality of cream and more frequent marketing of cream are necessary for a better quality of butter.

The ice cream industry of the State is in a flourishing condition and affords a profitable market for butterfat sold as sweet cream.

More dairy cattle have been imported into the State during the past year than in any year previous, and this shows the interest manifested in the dairy industry.

The possibilities and opportunities for students and graduates to enter the field of commercial dairying and dairy farming are unlimited in years to come. Many graduates find the dairy farm an attractive field, others will find opportunities for dairy work in college and in experiment station work, Government service and in secondary schools.

The courses offered in the Department give the students a thorough knowledge of general dairying as well as a specialized technical training in the various branches of the dairy industry.

The facilities for instruction include a modern commercial creamery and ice cream factory, equipped with sanitary machinery and appliances, as well as lecture rooms and laboratories for the teaching of the Babcock test and other dairy tests. The farm dairy room is equipped with modern cream separators, clarifiers, churns and butter workers.

The market milk room and cheese room are well equipped with all modern machinery to facilitate instruction in these two important branches of dairying.

The activities of the department include, besides the regular teaching of students, experimental work and research studies continually going on throughout the year by the departmental staff. Researches are being carried on in ice cream making, buttermaking and marketing of dairy products.

Students majoring in the department have an opportunity to acquaint themselves with methods and results of experimental data.

#### **SUBJECTS**

102 Elements of Dairying. Class 2 hours, laboratory 4 hours. Credit 3½.

(One hour lecture and one hour recitation.)

A general survey of the field of dairying, including a study of the secretion of milk, the Babcock test, farm buttermaking, farm separators, production of sanitary milk, cow test associations, and advanced registry testing.

Text: Milk and Its Products, Wing.

303 Testing Milk and Its Products. Class 1 hour, laboratory 6 hours. Credit 3.

A thorough study in the use of the Babcock test. Includes testing of milk and cream for butterfat, calibrating of glassware and testing skimmilk, buttermilk, cheese, condensed milk and ice cream for butterfat. The lactometer and its application to the detection of adulteration, different methods of testing for acidity, fermentation tests, detection of oleomargarine, renovated butter. Tests for preservatives in different dairy products are also included.

Text: Testing Milk and Its Products, Farrington and Woll.

304 Factory Operation. Class 2 hours, laboratory 8 hours. Credit 4%.

A study of modern methods in buttermaking, including pasteurization, ripening, starters, churning and moisture control. Includes also the subject of creamery management, different forms of creamery organization, creamery construction and accounting.

Text: Principles and Practices of Buttermaking, McKay and Larsen.

404 Market Milk and Dairy Inspection. Class 2 hours, laboratory 3 hours. Credit 3.

A study of market milk and its control; milk and diseases, pasteurization of milk, modified milk, fermented milk, condensed, evaporated milks and desiccated milks. The manufacture of milk sugars, casein, oleomargarine, renovated butter, and ice cream.

Text: Dairy Technology, Larsen and White.

405 Cheesemaking. Class 1 hour, laboratory 6 hours. Credit 3.

The work given covers such subjects as methods of producing and handling milk for cheesemaking, the manufacture of cheddar and other cheese; a study of the chemical and bacteriological changes which take place during the ripening process, and the construction and management of cheese factories. Among the varieties of cheese that will be manufactured are cheddar, brick, gouda, pimento and cottage cheese.

Text: Science and Practice of Cheesemaking, Van Slyke and Publow.

# 406 Dairy Seminar. Class 1 hour. Credit 1.

Each student will prepare a thesis on a dairy subject, arranged in outline form at the beginning of the semester, after consulting with the instructor. Students will be given the privilege of writing and reporting on dairy subjects of special interest to them.

Summary of certain bulletins will be required.

#### 407 Milk Production. Class 3 hours. Credit 3.

A study of factors governing the choice of a dairy breed, best methods of handling dairy cattle, improved standards of production, sanitary and certified milk production, planning and equipping dairy barns and milk houses, equipping the dairy farm, and marketing dairy products.

Text: Dairy Cattle and Milk Production, Eckles.

409 Domestic Dairying. Class 1 hour, laboratory 3 hours. Credit 2.

Elective for Junior and Senior girls. The care of milk and cream in the home; sanitary milk production; milk dietetics and hygiene; the use of dairy products as food; farm buttermaking, and ice cream and ices

#### DEPARTMENT OF HORTICULTURE

F. M. Rolfs, Professor Frank B. Cross, Instructor C. W. Rapp, Graduate Assistant R. Percy Roberts, Foreman

The courses offered in this department are designed to give the student a thorough knowledge of the most important lines of horticultural work. Instruction consists of lectures, recitations and practical exercises in the laboratory and field.

The facilities for instruction include lecture rooms, reading room, laboratory, implement house, and a practical work room; orchards of a number of the leading varieties of fruits, plantings of vegetables, a small nursery, a cellar, greenhouse, hotbeds, and cold frames. The department is also well equipped with tools, implements and apparatus for giving practical work.

The office, laboratory and classroom are located on the third floor of Morrill Hall. The office and horticultural reading room are combined. The room contains a number of the leading magazines, journals and reference works pertaining to horticulture, as well as a set of Station and United States Government publications. It is intended for the use of students specializing in horticulture, to give them a broader view of the subject and to keep them in touch with current horticultural information. The laboratory is well equipped with modern apparatus for horticulture research work.

The implement shed, work room, cellar, cold frames and propagating beds are located on the horticulture grounds. The work room is supplied with packing tables, workbenches and other equipment for instructional work. The department is well equipped for giving practical instruction in the various methods of plant propagation; the study of buds and twigs of fruits and ornamental plants; a study of vegetables, fruits, nuts; the design of greenhouse structures and landscape plans; seed testing, and the storing, grading and packing of horticultural products. The cold frames and hotbeds are of various types for home use and commercial purposes, and are used in the vegetable forcing work.

The orchard, vineyard and garden of the Experiment Station offer practice in the pruning and training of various fruits, and also give an opportunity for comparison of the various cultural methods. The grounds, cellar and greenhouse afford ample material for laboratory and classroom work.

# SUBJECTS

104 Vegetable Gardening. Class 2 hours, laboratory 2 hours. Credit

This course includes the general principles of vegetable culture. dealing principally with a study of the home garden. Attention is given to garden soils and fertilizers, forcing and market gardening, as well as other culture features.

Text: Productive Vegetable Gardening, Boyle.

Reference: Gardening for Profit, Henderson.

201 Fruit Growing. Class 2 hours, laboratory 4 hours. Credit 31/3.

A course designed to give the student a practical knowledge of fruit growing and at the same time serve as a foundation work for the course in Systematic Pomology. It embraces a study of planting, pruning, spraying, cultivation, cover crops, frost prevention and fertilizers for orchards and small fruits. The practical work includes making of orchard plans, laying out the orchard, planting, pruning and spraying, and the identification and judging of fruits most commonly grown in Oklahoma.

Text: Productive Orcharding, Sears.

Reference: Principles of Fruit Growing, Bailey,

301 Systematic Pomology. Class 2 hours, laboratory 4 hours. Credit

Prerequisite: Hort. 201.

A study of the origin and history of our cultivated fruits, and of the varieties best adapted to the home and commercial orchards. Trees representing the different species of our leading fruits are carefully observed, and also the influence of environment, upon the behavior of the trees and on the development of their products. Practice is given in describing and identifying varieties of fruits and nuts, placing exhibits, and fruit judging. Text: Systematic Pomology, Waugh.

304 Plant Breeding. Class 3 hours. Credit 3.

Prerequisite: Bot. 303.

A study of the application of principles in breeding to improve our fruits and vegetables; the selection and fixing of varieties; the improvement of plants by selection. Special attention is given to breeding for quality and disease resistance. Practical work is given in the orchard, garden and greenhouse in cross-pollination, hybridization and selection.

Text: Plant Breeding, Bailey.

Reference: Plant Breeding, Davenport.

305 Canning and Handling of By-Products. Class 1 hour, laboratory 2 hours. Credit 1%.

A general study of horticultural by-products and fruits and vegetables especially adapted to canning. The different methods of canning, evaporating, drying, and the manufacture of vinegar and fruit juices are studied. Buildings, machinery and apparatus necessary for successful work receive considerable attention. Practical work is given in all the fundamental principles connected with the operation of a cannery.

Theory work is given by lectures.

306 Nursery Practice. Class 2 hours, laboratory 2 hours. Credit 23/3.

A study of methods by which plants are propagated by means of division, cuttings, layering, budding and grafting; production and care of seeds, seed testing, bulb reproduction; exercises in the laboratory in propagating garden seeds, flowers, shrubs, forest and fruit trees; nursery practice.

Text: Plant Propagation, Kains.

Reference: The Nursery Book, Bailey.

401 Commercial Pomology. Class 2 hours, laboratory 2 hours. Credit 2%.

Prerequisite: Hort. 301.

A course treating of the care of fruit trees, the management of orchards and the handling of fruit. Problems of pruning, spraying, cultivating and frost prevention are studied; also the most approved methods of harvesting, grading, packing, transportation, marketing, storing and construction of cold storage plants. A careful study of the control measures for insect pests and fungus and bacterial diseases are also given considerable attention.

Text: Fruit Harvesting, Marketing and Storing, Waugh; American Fruit Culturist, Fuller.

402 Landscape Gardening. Class 2 hours, laboratory 2 hours. Credit 23/3.

A study of the principles involved in the planting and decorating of public and private grounds and the selection of ornamentals adapted for planting in Oklahoma. Practice consists in designing plans, laying out drives and walks, and planting flower beds, shrubs and trees.

Text: Landscape Gardening, Maynard.

Reference: The Landscape Beautiful, Waugh.

404 History and Literature of Horticulture. Class 2 hours. Credit 2.

Open only to students taking the horticultural course. A study of current horticultural literature, including a review of horticulture periodicals, bulletins and United States Government publications.

405 Forestry. Class 3 hours. Credit 3.

Prerequisite: Bot. 101, 102.

A lecture and field course dealing with the general principles of forestry, relation of forestry to agriculture, windbreaks, shelter belts, lumbering, and conservation.

Text: Green's Principles of American Forestry.

Reference: Practical Forestry, Gifford.

406 Forestry. Class 3 hours, laboratory 2 hours. Credit 3\%.

Prerequisite: Hort. 306, 405; Bot. 305.

A study of the fundamental principles of forestry, together with a detailed study of the forests of Oklahoma. This course is designed to meet the needs of students who wish to specialize in forestry.

Theory work given by lectures.

408 General Horticulture. Class 3 hours, laboratory 2 hours. Credit 3%.

Elective.

This course is offered for teachers, and is designed to meet the needs of school garden work. It includes a study of the principles and practice of some of the most important lines of horticulture work. Considerable time is given to the underlying principles of successful gardening and the adaptation of small areas to the production of vegetables and flowers. The subjects of soil preparation; seed selection; fertilizers: hotbeds; planning, planting and care of the garden are given consideration. The fundamental principles of landscape gardening and home decoration are briefly considered. The selection of trees, shrubs and flowers, places to plant them, and artistic arrangement are discussed. Some attention is also given to the different methods of propagating, planting, cultivating and harvesting of the different varieties of fruit most commonly grown in Oklahoma.

Text: Manual of Gardening, Bailey.

References: How to make a Vegetable Garden, Fullerton; Landscape Gardening, Maynard; How to Make a Fruit Garden, Fletcher.

# DEPARTMENT OF POULTRY HUSBANDRY

B. A. AHRENS, Professor

The Poultry Department is equipped with a large administration building, which includes classrooms, incubator cellar and storage for the different poultry paraphernalia used in instruction. The plant consists of five acres of good poultry land on which are houses for laying and breeding stock. This includes a new long laying house in which instruction is given in the care and management of poultry, and also semi-monitor houses, in which instruction in breeding poultry is given. There are a num-

ber of colony houses and one long brooding house for brooding chicks on a range, which covers nearly three acres. There are upto-date incubators, including a Candee mammoth incubator, brooders of the more prominent makes, and other poultry machinery which is used for instructional purposes, not only in the scientific side of poultry, but also from a practical and commercial standpoint. Many opportunities are offered for students who are interested in poultry to get a practical education along this line. The present stock consists of ten varieties of chickens, which have been trapnested for the past three years and all of high class quality.

#### SUBJECTS

P. H. 305 Farm Poultry. Class 2 hours, laboratory 4 hours. Credit 3½.

This is a lecture course dealing with poultry houses, yards, etc.; fattening and marketing of poultry; description of breeds and varieties of poultry. The laboratory consists of practice in poultry carpentry, caponizing, killing and dressing, grades of market poultry, candling and grading eggs, and anatomy of birds.

P. H. 303 Poultry Practice. Laboratory 2 hours. Credit 3.

Practice in caponizing, killing and dressing, grades of market poultry, candling eggs, ordinary work about a poultry farm, anatomy of birds.

Elective for Juniors and Seniors.

P. H. 411 Poultry Judging. Laboratory 2 hours. Credit 3/3.

This consists of a study of various breeds and varieties of chickens. Origin, history and points of excellence.

Elective course for Juniors and Seniors.

P. H. 408 Incubation and Brooding. Class 1 hour, laboratory 6 hours. Credit 3.

Every student will operate an incubator and brooder, keeping accurate records of temperature, etc.

P. H. 404 Poultry Diseases. Class 1 hour. Credit 1.

This is a thorough study of various poultry diseases, with as much practical work as is possible. Diseased birds will be advertised for and examined in laboratory, and laboratory work carried on over these birds.

Elective for Juniors and Seniors.

P. H. 406 Poultry Management. Class 1 hour. Credit 1.

Advanced course. Management of fowls on large poultry farms. Careful study will be made of commercial methods, and wherever possible large poultry farms will be visited. Considerable outside reading will be assigned.

Elective for Juniors and Seniors.

#### DEPARTMENT OF FARM ENGINEERING

H. L. THOMSON, Professor

The courses in farm engineering are aimed to give the student the practical knowledge of farm machines, motors, tractors, farm structures, irrigation, drainage and rural roads with which knowledge the farmer must be equipped to farm successfully today. Improved tillage, seeding, harvesting and feed-preparing machinery has increased the capacity and decreased the working hours of farm labor.

The modern farm motor and tractor give ready and ample sources of power to meet the increasing demands of agriculture. The improvement in farm buildings of all kinds has been of great benefit to farm economy. Improved rural roads have brought the farm and market closer together. Irrigation has great possibilities in some sections, while drainage is of equal value in others.

The demand for teachers, farm managers, county agents, experts for farm implement firms and for tractor companies, men for United States Government and railroad work, specially trained in these subjects is great. To the man who intends to return to the farm and work for himself, this training is of particular value.

The department is supplied with the various kinds of farm machines, gas and oil engines, tractors, models of silos, barns, etc., levels and farm surveying instruments, and drainage tools to give practical work in these courses.

# SUBJECTS

201 Farm Mechanics. Class 1 hour, laboratory 3 hours. Credit 2.

A general course for all students in agriculture, covering briefly rope tying and splicing, principles of draft, cultivating, seeding and harvesting machinery, farm power, water supply, elements of leveling, terracing.

Text: Agricultural Engineering, Davidson.

603 Farm Motors. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: F. E. 101.

A study of the working principles, operation and costs of the various types of gas and oil engines. Gas tractors. Special attention is paid to the modern oil engine as an economical source of power for irrigation and other heavy duty work.

304 Farm Structures. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: F. E. 303.

Design, construction, material and cost of farm buildings, including barns, silos, machine sheds, swine and chicken houses. Farm concrete construction.

Text: Farm Structures, Ekblaw,

409 Farm Power Machinery. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: F. E. 303, 304.

A study of the various power-driven machines of the farm—grinders, shellers, ensilage cutters, threshers, irrigation pumps, electric lighting plants, home water supply systems—in connection with the various prime movers. The installation of gearing, belting and shafting on the farm. Farm power house.

410 Rural Roads. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: F. E. 101, 303.

Location, drainage, roadbed materials, construction, maintenance and costs. Laws governing. Rural road machinery. Special attention is paid to the upkeep of rural roads.

Text: Roads, Paths and Bridges, Page.

412 Irrigation and Drainage. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: F. E. 303.

Study and field practice in the location, operation and maintenance of these systems. Their efficiency, costs and profits. Their effect on the land and crops. The duty of water.

Text: Irrigation and Drainage, King.

#### GENERAL AGRICULTURE

402 College and Experiment Station Work, Organization and Function. Class 1 hour. Credit 1.

This course is intended to familiarize the Senior students with the history and organization of the American land grant colleges, including the agricultural experiment stations and the extension divisions. A study is made of the strong and weak points of these institutions as compared with other institutions of higher education in the United States from the standpoint of both the undergraduate and graduate student. The amount of Federal and State aid given these institutions and its distribution into educational, research and extension lines is discussed. The further object is to familiarize the student with the lines of work being undertaken in the various experiment stations and the special features that are made prominent in the various States. The laboratory work will be in the nature of research in the library. The course is designed to prepare students for entrance into college and station work where such is desired and to give those who are going into the more practical application of their calling upon the farm an opportunity to become familiar with the different institutions and the best means of utilizing the information available.

404 Bulletin Review. Class 1 hour, laboratory 2 hours. Credit 13/3.

A comprehensive study of technical and popular bulletins, designed to assist the student to get the maximum value from Govern-

ment and agricultural college publications. Some practice in bulletin writing and editing.

#### DEPARTMENT OF SHORT COURSES

D. C. Mooring, Professor of Short Courses

The following short courses are offered by the School of Agriculture:

- 1. Short Course in Practical Agriculture.
- 2. One Week's Course in Milk and Cream Testing.
- 3. Six Weeks' Regular Dairy Course.

# Short Course in Practical Agriculture

The Short Course in Practical Agriculture is, in a way, an outgrowth of the Twenty Weeks Short Course that has proved so popular in the past. The course now consists of three winters' work of twelve weeks each, beginning in November and closing in February. It was found that students who completed the single year of the Twenty Weeks Short Course were anxious to pursue their studies farther. Then, too, it was almost impossible in the short period of twenty weeks to give the enterprising farm boy enough of the fundamental science of agriculture to enable him to introduce the most approved methods of farming on the home farm.

This course is designed for young men from the farms of Oklahoma who have not the time nor the inclination to take a regular course in the high schools of the State, to be followed by a four-year course in scientific agriculture in this institution, yet who desire a training in the practical application of the science of agriculture to the business of farming. It provides a course of study that will give the student a maximum of the agricultural studies relating to farm and livestock work, and in addition gives as much of the general studies as may be most useful in training young men to become leaders in their chosen calling on the farms of the State.

The entire equipment of the College—the teaching force, the library and the results obtained in experimental work—are at the service of the students of the Short Course Department.

There are no entrance examinations to be passed for admission to the Short Course in Practical Agriculture. The prospective student must be at least sixteen years of age and must have had training equivalent to a good, common school education.

# Date of Opening

The Short Course in Practical Agriculture will open this year November 19, 1917, and close February 23, 1918. A short vacation will be given at the holiday season.

## Write for Further Information

For illustrated circular giving full details concerning the short course, write the Secretary of A. and M. College, Stillwater, Oklahoma.

# Short Course in Practical Agriculture

#### FIRST YEAR

FIRST TERM			SECOND TERM		
English Public Speaking Grain Crops Carpentry Farm Arithmetic Farm Machinery Gymnasium	1 3 5	(4) (4) (4) (3)	English Public Speaking Farm Accounts Types and Breeds of Farm Animals Botany Drawing Forge Shop Gymnasium	5 3	(4) (2) (4) (4) (3)
	SE	COND	YEAR		
English Public Speaking Soils Veterinary Anatomy Breeding of Farm Animals Poultry Physics Farm Dairying Gymnasium	1 2 3 1 2	(4) (2) (2) (4) (3)	English Public Speaking Animal Diseases Garden Poultry Stock Judging Forage and Fiber Crops Gymnasium	1 3 2 1	(2) (2) (4) (4) (4) (3)
	Т	HIRD	YEAR		
Trees and Fruits Economics Farm Management Farm Motors and Tractors Advanced Stock Judging Entomology Agricultural Chemistry	3 1 1	(2) (6) (6) (2) (2)	SECOND TERM  Marketing Farm Structures Principles of Feeding Animal Production Agricultural Chemistry Road Building Bacteriology Entomology	1 1 4 2 2 3	(6) (2) (6) (2)

# Special Work in Dairying

Students desiring special work in dairying may elect the following subjects, providing five or more register for the work:

#### SECOND YEAR

		SECOND	ILAK		
	FIRST TERM		Testing Milk	SECOND TERM and Its Products 2	(4)
		THIRD	YEAR		
Buttermaking Making	FIRST TERM and Ice Cream	3 (4)	Dairy Manag	second term ement	

# One-Week Course in Milk and Cream Testing December 31, 1917-January 5, 1918

The dairy laws of the State require that all persons who operate stations where milk or cream is bought on a butterfat basis shall have a reasonable knowledge of how the Babcock test is operated. There is also the requirement that station operators shall know in a general way the factors that influence the quality of the product they are handling.

The Dairy Husbandry Department offers a short course for station operators and for those who intend to operate a station. The work will consist mainly of laboratory work, supplemented by lectures. Emphasis will be given to milk and cream testing. There will be a brief discussion regarding methods of producing and handling sanitary milk and cream. The relation between cream buyer and farmer will be considered, as will also the dairy laws of the State.

#### Examinations

Opportunity will be given at the end of the course for taking examination for testing license.

# One Week's Special Dairy Course

This special one week's course in dairying is to give an opportunity for buttermakers, ice cream makers, and market milk men, as well as cream station operators, to study modern methods of handling dairy products, and to become familiar with some of the technical principles and facts regarding the manufacture of butter, ice cream, and the handling of cream and market milk. More investigations are carried on in the manufacture of dairy products than in perhaps any other line of agricultural advancement. The successful manufacturer of dairy products must always keep pace with new, modern ideas, and must be continually studying new methods in order to keep abreast of the new ideas. The entire equipment of the Dairy Department of the A. and M. College will be at the disposal of students in this special dairy course.

# Six Weeks' Regular Dairy Course

The six weeks' regular dairy course, which begins with the Short Course in Practical Agriculture and continues during the first term, is designed for young men who wish to enter the field of commercial dairving and become buttermakers, ice cream makers, and market milk dealers. Practical instruction will be given in modern methods of buttermaking, ice cream making, as well as some instruction in the manufacture of different kinds of cheese. The course will also include special lectures and demonstrations in the handling and pasteurization of market milk. Students will be given an opportunity to secure practice in the grading and sampling of cream and testing of cream for butterfat, testing acidity of cream, pasteurization of cream, ripening of cream with pure culture starter, churning, working and printing butter, and making moisture and salt tests of butter. In the course for ice cream makers, students will have facilities of modern freezers to obtain instruction in standardizing mixtures and freezing and hardening of ice cream. Opportunity will also be given in testing ice cream for butterfat as well as detailed instruction in practices and principles employed in modern ice cream factories. creamery and ice cream divisions at the A. and M. College is equipped with the most modern machinery and sanitary appliances to manufacture and handle dairy products in the most upto-date manner. The course will include special lectures and laboratory work and dairy practice in the manufacture of dairy products.

For further information, write for special Short Course Circular to Dairy Department, Oklahoma A. and M. College, Stillwater, Oklahoma.

# THE SCHOOL OF ENGINEERING

#### ALFRED BOYD, Dean

In compliance with the provisions of the Morrill land grant, the teaching of engineering was begun at the Oklahoma Agricultural and Mechanical College by the establishment of a course in mechanical engineering. The first class was graduated in 1902. Later, courses in electrical, civil and architectural engineering were added in the order named. These four departments compose the School of Engineering. As far as practicable, in the development of courses, they have been kept closely related to the important industries of the State. With the growth of manufacturing, of the oil industry, the increased use of electrical power, the improvement of highways, of water supply systems, and increased interest in better buildings, the importance of having men with the proper training will be more fully recognized.

There are two large buildings on the campus devoted to the work of instruction in engineering. These are the Engineering Building and the Shop Building. The former was erected in 1912 at a cost of \$75,000.00. It is three stories high, covers an area 160 by 80 feet, and is built of reinforced concrete and brick with stone trimmings. On the ground floor are located the steam and hydraulic laboratories, the electrical laboratory, the laboratories for the testing of structural materials and road materials, storage batteries, room for surveying instruments and office for the dean. On the next floor are the physics laboratory and lecture room, four other lecture rooms for the different departments, rooms for photometry, physical apparatus, and offices for the heads of departments. On the top floor are the large drafting rooms, classrooms and offices for several of the departments, and rooms for the storing of records.

The Shop Building is of stone and brick and covers an area of 40 by 200 feet. For a depth of 80 feet it is two stories high

and the balance one story. It provides accommodations for the wood shop, machine shop, forge shop and foundry, and a tool room.

The power plant of the College, with its steam boilers, steam engines and generators is also used by the School of Engineering for the purpose of making tests and familiarizing the student with the use of this class of machinery.

Mention should be made of the Engineering Society, an organization composed of students from the various engineering departments. They meet twice a month for the discussion of engineering subjects. These meetings tend to encourage a lively interest in practical engineering work, and give the students confidence in speaking before an audience.

# Professional Degrees in Engineering

For information in regard to professional degrees in engineering and the conditions under which they are granted to graduates of the School of Engineering, see Requirements for Graduation.

# Experimental Work in Engineering

The departments of the School of Engineering are carrying on in the shops, laboratories and field, research work of value to the industries of Oklahoma. Those lines of investigation are undertaken which are important in the development of the State's resources, or in adding to the health and comfort of the people of the State.

Some of the subjects of particular interest to the people of Oklahoma are the following:

The properties of petroleum and its economical use in the industries.

The utilization of natural gas.

The examination and testing of the various structural and road materials to be found in Oklahoma.

The study of the problems of water supply and sewage disposal as related to the health of rural and urban communities.

Experimental work to determine the proper methods of irrigation and drainage to suit Oklahoma conditions.

#### COURSES IN THE SCHOOL OF ENGINEERING

The following outline of study represents the required and elective work in the School of Engineering. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits, exclusive of any credits given in military science and physical education. Students will not be allowed to register in fewer than twelve nor more than

twenty credit hours.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

### (For M. E., E. E., and C. E. Courses)

FIRST SEMESTER			SECOND SEMESTE	R	
Eng. 101, College 3	rs.	Cr.	Eng. 102, College	Hrs.	Cr.
Math. 105, College Algebra 4	4		Math. 108, Plane	3	•
Chem. 101, Inorganic 3		1-3	Trigonometry		3
Draw. 101, Freehand Arck. 111, Descriptive	(4) 1	1-3	M. E. 102, Engineering	2 (4)	3 1-3
Shop 101, Woodwork	(4) 1	1-3	Arch. 116, Descriptive	(4)	1 1-3
Military Science	(3) 1 (3) 1		Geometry Pub. Spk. 123, Essentials	1 (4)	2 1-3
			of Public Speaking	1 (2)	1 2-3
			M. E., E. E.	(4)	1 1-3
			Shop 106, C. E., A. E Military Science Physical Education	(4) (3) (3)	1 1-3 1 1

# Mechanical Engineering

## SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Math. 207, Anal. & Calc 5 Phys. 201, Engineering Physics Eng. 209, Technical Writing M. E. 201, Emp. Mach. Design Shop 203, Foundry C. E. 201, Surveying Military Science (3)	Cr. 5 5 2 2 1 1-3 1	Math. 208, Calculus	Cr. 5 4 1 1-3 1

Military Science(3)	1			
	JUNIOR	YEAR		
FIRST SEMESTER		SECOND SEMESTER	2	
C. E. 301, Appl. Mech 4	Cr.	C F 202 Mark of	Hrs.	Cr.
M. E. 301, Materials of	4	C. E. 302, Mech. of Materials	3	3
Machines	2	C. E. 308, Testing Laboratory	(3)	1
Design 3 M. E. 305, Heat Power	3	M. E. 304, Machine	(6)	2
Engineering 4	4	M. E. 306, Thermody-	(6)	_
M. E. 307, Mechanical		namics	3	3
Shop 301, Machine Shop (4)	2 1 1-3	C. E. 312, Hydraulics E. E. 308, Dynamo-Electric	3 (2)	3 2-3
(1)		Machinery	3 (3)	4
		Shop 302, Machine Shop	(4)	1 1-3

# SENIOR YEAR

	S	ENIOR			
FIRST SEMESTER		0	SECOND SEMESTER		
	rs.	Cr.	M F 412 Steem Berry	Hrs.	Cr.
M. E. 401, Steam Engine Design	(6)	4	M. E. 412, Steam Power Plant Design	(3)	3
M. E. 405, Mechanical			E. E. 406, Electric Power	(0)	
Laboratory	(6)	2	Plant Design 1 M. E. 414, Works	(3)	2
E. E. 407, Alternating Current Machinery	(3)	4	M. E. 414, Works Management		3
Econ. 201, Elements of	(0)	7	Econ, 406, Laws of		3
Economics		3	Econ. 406, Laws of Business 2 Electives of below		2
Shop 401, Machine Shop	(4)	1 1-3	Electives of below 5		5
Liectives of below					
		ELECT:	IVES		
FIRST SEMESTER		_	SECOND SEMESTER		
M F 402 Cas Parran	rs.	Cr.		Hrs.	Cr.
M. E. 403, Gas Power Engineering2			M. E. 410, Pumping		
M. E. 497. Compressed			M. E. 416, Thesis 4		
Air Machinery 2 M. E. 421, Hydraulic Machinery 2			Machinery		
M. E. 421, Hydraulic			Design	to 4	
Machinery 2			M. E. 420, Refrigeration 2 M. E. 424. Heating &		
			Ventilation 2		
FI	lect-	ical E	ngineering		
E					
	SOP	HOMOI	RE YEAR		
FIRST SEMESTER		0	SECOND SEMESTER		
Moth 207 Applytics &	rs.	Cr.	Moth 209 Colombia	Hrs.	Cr.
Math. 207, Analytics & Calculus 5		5	Math. 208, Calculus       5         Phy. 202, Engineering       4         Physics       4         M. E. 204, Kinematics       3         Shop 202, Forge         Military Science		5
Phy 201 Engineering		3	Physics 4	(3)	5
Physics 4	(3)	5	M. E. 204, Kinematics 3	(3)	4
Eng. 209, Technical		2	Shop 202, Forge	(4)	1 1-3
M F. 201 Empirical		2	Military Science	(3)	1
Machine Design	(6)	2			
C. E. 201. Elements of					
Shop 203 Founday	(3)	1 1-3			
		1			
		UNIOR	YEAR		
FIRST SEMESTER	-		SECOND SEMESTER		
Hı	rs.	Cr.		Hrs.	Cr.
C. E. 301, Applied			C. E. 302, Mechanics		
Mechanics 4		4	of Materials 3		3
Phy. 301, Electrical Measurements	(3)	3	Phy. 302, Electrical Measurements	(3)	2
E. E. 303. Direct Current	(0)		E. E. 304. Direct Current	(0)	_
Machines	(3)	3	Machines	(4)	4 1-3
Engineering 4		4	Machines	(2)	3 2-3
M. E. 307, Mechanical		*	Laboratory	(3)	1
Laboratory	(6)	2	Laboratory		
Shop 301, Machine Shop	(4)	1 1-3	Laboratory	(3)	1 1 2
	C	CALLOD	Shop 302, Machine Shop	(4)	1 1-3
	5.	ENIOR			
FIRST SEMESTER		C .	SECOND SEMESTER	rr	Cr.
F F 401 Alternating	rs.	Cr.	E. E. 402. Alternating	Hrs.	Cr.
E. E. 401, Alternating Current Machines 4	(6)	6	E. E. 402, Alternating Current Machines 3	(6)	5
E. E. 403, Telephony 3 E. E. 405, Electrical		4	E. E. 404, Electrical Power Transmission 2		2
E. E. 405, Electrical	(3)	2	F F 406 Flectric		2
Econ 201 Flements of	(3)	and the same of th	E. E. 406, Electric Power Plants	(3)	2
Economics		3	M. E. 412, Steam Power		
E. E. 411, Wiring &			Plants	(3)	3
Illumination			Rusiness 2		2
M. E. 421, Hydraulic			Business		
Machinery 2		2	Railways		
			M F 420 Refrigeration 2		2
			M. E. 420, Refrigeration 2		

# Civil Engineering

# SOPHOMORE YEAR

Si	OPHOMO	RE YEAR		
Hrs.   Hrs.   Hrs.   Calculus   S   Phy. 201, Engineering   Physics   4 (3   Math. 205, Spherical   Trigonometry   1   Eng. 209, Technical   Writing   2   Shop 203, Foundry   4 (4   C. E. 203, Surveying   1 (4   Military Science   3   (3   3   3   3   )	5 ) 5 I 2 ) 1 1-3 ) 2 1-3	Math. 208, Calculus	(3) (6) (4) (3)	Cr. 5
	JUNIOR	YEAR		
FIRST SEMESTER Hrs.	Cr.	SECOND SEMESTER	Hrs.	Cr.
C. E. 301, Applied	4	C. E. 302, Mechanics of Materials		3
Mechanics		C F 310 Framed	(6)	4
Pavements	2	Structures 2 Chem. 328, Mineralogy 1 C. E. 308, Testing Laboratory	(6) (4)	2 1-3
Surveying		Laboratory	(3)	1
Drawing		C. E. 312, Hydraulics 3 C. E. 314, Railway	(2)	3 2-3
Engines 2 Chem. 321, Geology 2 Shop 301, Machine Shop (4)	2 2 1 1-3	Engineering 2		2
	SENIOR	YEAR		
FIRST SEMESTER		SECOND SEMESTER		
C. E. 401, Structural	Cr.	C. E. 402, Concrete	Hrs.	Cr.
Design 1 (6)	3 2	Structures	(6)	2
C. E. 413, Water Supply 2 C. E. 403, Irrigation 2 C. E. 415, Reinforced	2	C. E. 404, Sewerage & Drainage 2 Econ. 406, Laws of		2
C. E. 415, Reinforced Concrete	2	Business 2		2
C. E. 407, Testing Laboratory	) 1	Bact. 402, Sanitary Science 3		3
Laboratory	3 4	Science 3 E. E. 412, Dynamo- Electric Machinery 2		2
		C. E. 408, Thesis	(6)	2
	nd Archi	tectural Engineering		

FIRST SEMESTER	2		SECOND SEMESTER		
_ :	Hrs.	Cr.		Irs.	Cr.
Eng. 101, College	3	3	Eng. 102, College 3		3
Math. 105, College Algebra	4	A	Math. 108, Plane		2
Chem. 101, Inorganic		4 1-3	Trigonometry 3 Chem. 102, Inorganic 2		3 1.3
Arch. 111, Descriptive	J (T)	4 1-3	Arch. 112, Shades, Shadows	(+)	0 1-0
Geometray		2	& Perspective 1	(6)	3
Draw. 101, Freehand			Draw. 104, Freehand		
Drawing	(4)	1 1-3	Drawing	(4)	1 1-3
Arch. 105, Elements of	(4)	1 1 2	Arch. 106, Elements of	10	
Architecture Physical Education		1 1-3	Architecture Physical Education	(0)	2
Military Science	(3)	1	Military Science	(6) (3) (3)	1
manually percure	(3)	4	military belefice	(3)	4

#### Architecture

#### SOPHOMORE YEAR

50	)1 110MO	KE TEAK	
FIRST SEMESTER		SECOND SEMESTER	
Arch 211 History of	Cr.	Arch 212 History of	Cr.
Arch. 211, History of Architecture	1 2-3	Architecture 1 (2)	1 2-3
Eng. 209, Technical Writing 2 C. E. 201, Surveying 3		Arch. 214, Building	
C. E. 201, Surveying (3)	2	Construction 2 Pub. Spk. 123, Essentials 1 (2)	1 2-3
Arch. 207, Drawing from		Arch. 208, Drawing from	
Antique	2	Antique(6) Phy. 204, General	2
Design(9)	3	Physics 3 (3)	4
Design (9) Arch. 307, Water Color Painting (3)	1	Arch. 210, Architectural	3
Phy. 203, General	_	Arch, 308, Water Color	3
Physics		Painting	1
Physics       3 (3)         Shop 101, Woodwork       (4)         Military Science       (3)		Painting	1 1-3
	JUNIOR		
pidem erasperta		Freely Craspers	
FIRST SEMESTER Hrs.	Cr.	SECOND SEMESTER  Hrs.	Cr.
Arch. 301, History of		Arch. 302, Historic	
Architecture 1 (3)	2	Ornament 1 (3)	2
Arch. 303, Applied Mechanics 2	2	Arch. 304, Strength of Materials	4
Arch. 305, Plumbing &		Arch. 322, Pen & Ink	
Drainage	2	Rendering	1
Rendering(3)	1	Antique	2
ings & Estimates (6)	2	Design(15)	5
Arch. 311, Architectural		Econ. 406, Laws of	
Design	4	Business 2	2
Antique	2		
Illumination	2		
	CENTOR	VEAD	
	SENIOR	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Hrs.	Cr.	Hrs.	Cr.
Arch. 401, History of Painting & Sculpture 1	1	Arch. 412, Archaeology (4) Draw, 406, Clay Modeling (4)	1 1-3 1 1-3
Draw. 403, Life Class (6)	2	Arch. 408, Architectural	
Arch. 40/, Architectural	7	Design	7
C. E. 401, Structural		Ventilation2	2
Design 1 (6) Electives	3	& Decoration(9)	3
		Arch. 406, Seminar 1	1
Archit	ectural	Engineering	
SO	PHOMOI	RE YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Arch 211 History of	Cr.	Arch 212 History of	Cr.
Architecture 1 (2)	1 2-3	Arch. 212, History of Architecture	1 2-3
C. E. 201, Surveying (3)	1	Arch. 214, Building	2
Arch. 209, Architectural Design(9)	3	Construction 2 Phy. 204, General	-
38-41 007 A1-41		Phy. 204, General Physics	4
Geometry & Calculus 5 Phy. 203, General	5	Design(9)	3
Physics	4	Math. 208, Calculus 5 Shop 104, Woodwork (4)	5 1 1-3
Physics       3 (3)         Shop 101, Woodwork       (4)         Military Science       (3)	1 1-3	Design (9) Math. 208, Calculus 5 Shop 104, Woodwork (4) Military Science (3)	1
(0)		(-/	

# JUNIOR YEAR

FIRST SEMESTER	SECOND SEMESTER
Hrs. Cr.	Hrs. Cr.
Arch. 313, Drawing from Antique	Arch. 310, Advanced Working Drawings (9) 3
Arch. 305, Plumbing &	C. E. 302, Mechanics of
Arch 309 Working	Materials
Drawings & Estimates (6) 2   Eng. 209, Technical   Writing   2   2     C. E. 301, Applied   4   4	Concrete 2 2 E. E. 412, Dynamo- Electric Machinery 2 2 C. E. 308, Testing
Writing 2 2	Electric Machinery 2 2
C. E. 301, Applied	C. E. 308, Testing Laboratory
Mechanics 4 M. E. 311, Steam & Gas	C. E. 310. Framed
Engines 2 2 Pub. Spk. 123, Essentials	Structures
of Public Speaking 1 (2) 12-3	
SENI	OR YEAR
FIRST SEMESTER	SECOND SEMESTER
Hrs. Cr.	Hrs. Cr.
Arch. 307, Water Color	Arch. 312, Architectural
Painting	Design
Design	Ventilation
Illumination 2 2	Structures 1 (2) 2
C. E. 411, Steel Construction 2 2	Econ. 406, Laws of Business 2
C. E. 401, Structural	Arch. 308, Water Color
Design 1 (6) 3 C. E. 407, Testing	Painting (3) 1 Electives 4
Laboratory (3) 1	
Flactives 3 3	
Laboratory (3) 1 Electives 3	
	Course in Architecture
Two-Year Special	Course in Architecture
Two-Year Special	T YEAR
Two-Year Special FIRS FIRST SEMESTER Hrs. Cr.	SECOND SEMESTER Hrs. Cr.
Two-Year Special FIRST FIRST SEMESTER Hrs. Cr. Arch. 211, History of Architecture 1 (2) 12.3	SECOND SEMESTER  Arch. 212, History of  Architecture 1 (2) 12.3
Two-Year Special FIRST FIRST SEMESTER Hrs. Cr. Arch. 211, History of Architecture 1 (2) 12.3	SECOND SEMESTER  Arch. 212, History of  Architecture 1 (2) 12.3
Two-Year Special FIRST FIRST SEMESTER Hrs. Cr. Arch. 211, History of Architecture 1 (2) 12.3	SECOND SEMESTER  Arch. 212, History of  Architecture 1 (2) 12.3
Two-Year Special FIRST FIRST SEMESTER Hrs. Cr. Arch. 211, History of Architecture 1 (2) 12.3	SECOND SEMESTER  Arch. 212, History of  Architecture 1 (2) 12.3
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 Arch. 311, Architectural	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3  Arch. 208, Drawing from Antique (6) 2  Arch. 308, Water Color  Painting (3) 1  Arch. 112, Descriptive  Geometry 1 (4) 2 1-3  Arch. 312, Architectural
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 2 Arch. 311, Architectural Design (12) 4 Electives 6	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 Arch. 311, Architectural Design (12) 4 Electives 6 SECO	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4  ND YEAR
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 Arch. 311, Architectural Design (12) 4 Electives 6 6  SECO	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4  ND YEAR  SECOND SEMESTER
Two-Year Special  FIRST  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 2 Arch. 311, Architectural Design (12) 4 Electives 6 SECO  FIRST SEMESTER  Arch. 301 History of	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4  ND YEAR  SECOND SEMESTER
Two-Year Special  FIRST  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 2 Arch. 311, Architectural Design (12) 4 Electives 6 SECO  FIRST SEMESTER  Arch. 301 History of	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4  ND YEAR  SECOND SEMESTER
Two-Year Special  FIRST  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 2 Arch. 311, Architectural Design (12) 4 Electives 6 SECO  FIRST SEMESTER  Arch. 301 History of	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4  ND YEAR  SECOND SEMESTER
Two-Year Special   FIRST	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4 4  ND YEAR  SECOND SEMESTER  Hrs. Cr. Arch. 302, Historic Ornament 1 (3) 2 Arch. 404, Clay Modeling (6) 2 Arch. 412, Archaeology (4) 1 1-3 Arch. 406, Seminar 1 1 Arch. 408, Architectural
Two-Year Special  FIRST SEMESTER  Arch. 211, History of Architecture 1 (2) 1 2-3 Arch. 207, Drawing from Antique (4) 1 1-3 Arch. 307, Water Color Painting (3) 1 Arch. 111, Descriptive Geometry 2 2 Arch. 311, Architectural Design (12) 4 Electives 6 6  SECO  FIRST SEMESTER  Arch. 301, History of Architecture 1 (3) 2 Arch. 403, Life Class (6) 2 Arch. 401, History of	SECOND SEMESTER  Arch. 212, History of Architecture 1 (2) 1 2-3 Arch. 208, Drawing from Antique (6) 2 Arch. 308, Water Color Painting (3) 1 Arch. 112, Descriptive Geometry 1 (4) 2 1-3 Arch. 312, Architectural Design (15) 5 Electives 4 4  ND YEAR  SECOND SEMESTER  Arch. 302, Historic Ornament 1 (3) 2 Arch. 404, Clay Modeling (6) 2 Arch. 404, Clay Modeling (6) 2 Arch. 412, Archaeology (4) 1 1-3

## DEPARTMENT OF MECHANICAL ENGINEERING

EDWARD JOSEPH KUNZE, Professor CHARLES JABLOW, Associate Professor

The field of the mechanical engineer includes the design and construction of tools and machinery; the solution of problems of power generation, including those presented by the advent of the steam turbine and the gas engine; power transmission by mechanical means; and all questions involving refrigeration, heating and ventilation, gas manufacture and the mechanical equipment of railroads. He is concerned with the design of farm motors and of agricultural machinery; with hydraulic machinery for the water supply of cities; with operations involved in mining and ore preparation; and with the design and equipment of steamships. To him is entrusted the problems concerning pumps, compressors and mechanical conveyors. More broadly still, he has now come to be a conspicuous factor in our industrial development as an organizer, systematizer, and cost reducer. matter of record that for three years after graduation most technical men are engaged as draftsmen and subordinates; that for the next five years most are classed as superintendents, engineersin-fact, and minor executives, and that after eight years the larger proportion of mechanical engineering graduates are firm members, managers, and executive officials. Of the membership of the American Society of Mechanical Engineers, for example, 50% are manufacturers or chief officials; 16½ are engaged in professional practice as consulting specialists; while only 4% are actually concerned with details of mechanical design. The great work of the mechanical engineer is economical production. His success must be based on scientific training, but it must also depend upon the study of current methods. The aim of the course in mechanical engineering is to afford both of the above kinds of training. The student is therefore given a thorough training in the fundamental engineering principles while at the same time he is made conversant with the principles of contemporary engineering practice.

The student must also acquire at least the fundamentals of that broad cultural training which is recognized as indispensable to the success of men who must meet other men of varied experience and work with them in a professional capacity. This latter training is given, not by the addition of uncorrelated subjects, but, in the main, by directing the attention of the student to his responsibility as a citizen and in showing the application and relation of such subjects as economics, ethics, psychology and sociology to his professional subjects.

There is a certain amount of overlapping of all the engineering courses. The student therefore acquires a broad knowledge of the different branches of engineering. The work of the Freshman year is alike for the M. E., E. E. and C. E. courses. The Sophomore work is alike for the M. E. and E. E. courses. Beginning with the Junior year the differentiation between these courses increases.

In the shops as well as in the drafting rooms, examples are made real by doing away, as far as possible, with exercise pieces as such. Real machines are designed and built for real purposes. Seniors and sometimes Juniors design the machinery that is made. Sophomores work out most of the details, and Freshmen trace the drawings. Each does the work for which he is best fitted. This intensifies the work of the student. The object is not to make engineering less rigid, but to make it more interesting, and hence more tangible.

The steam, gas power, hydraulic and fuel and lubricant testing laboratories are all equipped with apparatus necessary for carrying on complete experiments. The wood shop, forge shop, machine shop and the foundry are likewise completely equipped with tools and machinery necessary to do work along lines obtaining in practice.

## **SUBJECTS**

102 Engineering Drawing. Drafting 4 hours. Credit 11/3.

Required of Freshmen in M. E., E. E. and C. E. second semester.

Lettering and drawing of machine parts from copy; drawing to scale.

Text: Engineering Drawing, French.

104 Mechanical Drawing. Drafting 2 hours. Credit 3/3.

Required of Freshmen in School of Commerce and Marketing, second semester.

Use of instruments, lettering, chart drawing and making of graphs.

201 Empirical Machine Design. Drafting 6 hours. Credit 2.

Prerequisite: M. E. 102.

Required of Sophomores in M. E. and E. E. first semester.

Machine drawing and proportioning of machine parts from the standpoint of good usage and general appearance rather than from the analysis of stresses.

Text: Engineering Drawing, French.

204 Kinematics. Class 2 hours, drafting 6 hours. Credit 4.

Prerequisite: M. E. 201; Math. 101.

Required of Sophomores in M. E. and E. E. second semester.

Theory of mechanism and application to instant-centers, cams, gears, linkages, belting, ballbearings, velocity and acceleration diagrams, etc.

Text: Elements of Mechanism, Schwamb and Merrill.

301 Materials of Machines. Class 2 hours. Credit 2.

Prerequisite: Shop 202, 203; Phy. 201; Chem. 102.

Required of Juniors in M. E. first semester.

The manufacture and properties of iron and steel as applied to machine construction; heat treatment of steels; metallography; alloy steels; properties of copper alloys and bearing metals.

Text: Metallurgy of Iron and Steel, Stoughton.

303 Machine Design. Class 3 hours. Credit 3.

Prerequisite: M. E. 201, 204. Concurrent with M. E. 301.

Required of Juniors in E. E. first semester.

Design of machine parts by analysis of stresses applied and selection of proper factors of safety. Applications of the laws of mechanics and kinematics to the design of machines, and a consideration of modifications due to practical conditions.

Text: Machine Design, Kimball and Barr.

304 Machine Drafting. Drafting 6 hours. Credit 2.

Prerequisite: M. E. 303.

Required of Juniors in M. E. second semester.

Draftingroom applications of the work given in M. E. 303. Design and working drawings of complete machines. A short time is devoted to the subject of jig and fixture design.

Text: Machine Design, Kimball and Barr; Mechanism, Schwamb and Merrill.

Reference Book: Mark's Mechanical Engineer's Handbook.

305 Heat Power Engineering. Class 4 hours. Credit 4.

Prerequisite: Phy. 202. Concurrent with M. E. 307.

Required of Juniors in M. E. and E. E. first semester.

A functional course covering the construction and operation of steam and gas power apparatus, including reciprocating and turbine steam engines, internal combustion engines, gas producers, boilers and power plant auxiliaries.

Text: Heat Power Engineering, Hirshfeld and Barnard; Steam Tables, Marks and Davis.

306 Thermodynamics. Class 3 hours. Credit 3.

Prerequisite: M. E. 305; Math. 208.

Required of Juniors in M. E. second semester.

The laws and properties of gases and vapors as applied to steam engines, gas engines, steam turbines, compressors and refrigerating machinery.

Text: Heat and Power Engineering, Hirshfeld and Barnard.

307 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Concurrent with M. E. 305.

Required of Juniors in M. E. and E. E. first semester.

Calibration of indicator springs, steam gages, thermometers, dynamometers and planimeters; of steam and fuel calorimeters; of venturi, disk and piston type meters. Proximate analysis of coals. Flash and burning tests of oils. Tests of lubricants and fuel oils. Tests of injectors and separators. Valve setting with use of indicator. Simple engine and boiler tests.

Text: Power Plant Testing, Moyer.

308 Mechanical Laboratory. Laboratory 3 hours. Credit 1.

Prerequisite: M. E. 307.

Required of Juniors in E. E. second semester.

Tests of pumps, air compressors, blowers, steam turbines, and gas, gasoline and oil engines.

Text: Power Plant Testing, Moyer.

311 Steam and Gas Engineering. Class 2 hours. Credit 2.

Prerequisite: Phy. 202.

Required of Juniors in C. E., A. E. and Arch. first semester.

The construction and selection of power plant machinery, including the different types of engines, boilers, pumps, compressors, refrigerating machines and power plant auxiliaries.

Text: Heat Engines, Allen and Bursley.

401 Steam Engine Design. Class 2 hours, drafting 6 hours. Credit 4. Prerequisite: M. E. 304, 306.

Required of Seniors in M. E. first semester.

A study of the various types of reciprocating steam engines. Theoretical and practical considerations entering into the design of valve gears and engine details. Governor design. Balancing and the determination of flywheel weights. Compound engines. Graphical as well as mathematical methods of design are employed. The principal parts of a highspeed automatic cutoff engine or of a Corliss engine are laid off on the drafting board.

Reference Book: Marks' Mechanical Engineer's Handbook.

403 Gas Power Engineering. Class 2 hours. Credit 2.

Prerequisite: M. E. 306.

Elective for Seniors in M. E. first semester.

A study of modern internal combustion engines (gas, gasoline, oil and alcohol), and of the production of gas for motive power (natural, illuminating, producer, blast furnace and coke oven gas). Gas producers and gas cleaning. Theory and method of internal combustion engine design.

Text: Modern Gas Engine and Gas Producer, Levin.

405 Mechanical Laboratory. Laboratory 6 hours. Credit 2.

Prerequisite: M. E. 307.

Required of Seniors in M. E. first semester.

Tests of pumps, air compressors, blowers, steam turbines, refrigerating machines, and gas, gasoline and oil engines. Special engine and boiler tests; Hirns' analysis and various over-all tests of power plants.

Text: Power Plant Testing, Moyer.

407 Compressed Air Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 303, 305.

Elective for Seniors in M. E. first semester.

A study of the physical properties of air and of the characteristics of the different types of air compressors with a view to intelligent selection of the proper type and size for a given set of conditions. Single and multi-stage compression. Hydraulic compression of air. Measurement and transmission of compressed air.

Text: Air Compression and Transmission, Thorkelson.

410 Pumping Machinery. Class 2 hours. Credit 2.

Prerequisite: M. E. 303, 305.

Elective for Seniors in M. E. first semester.

History and development of pumping machinery; force and lift pumps; reciprocating and centrifugal pumps; hydraulic presses and hydraulic pressure lines. Theory and method of design of pumps; study of the characteristics of the various types with a view to intelligent selection of the proper type and size for a given set of conditions.

Text: Pumping Machinery, Greene.

412 Steam Power Plants. Class 2 hours, drafting 3 hours. Credit 3. Prerequisite: M. E. 305.

Required of Seniors in M. E. and E. E. second semester.

A plant is designed on the drawing board after a careful study has been made of the different types of power plant apparatus; selection of units is then made to fulfill certain given conditions.

Text: Steam Power Plant Engineering, Gebhardt.

414 Works Management. Class 3 hours. Credit 3.

Prerequisite: Shop 302.

Required of Seniors in M. E. second semester.

This course covers the consideration of the entire work, including shops, departments and office as follows: Factory location and arrangement, organization and administration, duties of line and staff, cost of production and methods of modern manufacture for the attainment of accuracy and of high speed, time study, motion study, standardization, etc. Employment of labor, labor problems and wage systems. Industrial betterment.

Text: Principles of Industrial Organization, Kimball.

416 Thesis. Class work or laboratory as assigned. Credit 4.

Prerequisite: All preceding subjects.

Elective for Seniors in M. E. second semester.

The student is assigned a problem requiring some individual research, investigation or design on his part for the purpose of demonstrating ability or aptitude for independent work.

418 Advanced Machine Design. Drafting 3 to 12 hours. Credit 1 to 4. Prerequisite: M. E. 304, 305.

Elective for Seniors in M. E. second semester.

The work of design will come under some of the following subdivisions: Machine Tools, including fixtures and attachments; Boilers, including a study of the different types of boilers, furnaces, automatic stokers and of smoke abatement; Internal Combustion Engines, a more intensive study than is given in M. E. 305; Gas Power Machinery, including gas producers, scrubbers, tar separators, washers, holders, etc; Special Machinery.

420 Refrigeration. Class 2 hours. Credit 2.

Prerequisite: M. E. 304, 306.

Elective for Seniors in M. E. and E. E. second semester.

A study of the theory and principles of construction and operation of the different types of apparatus used and of the different systems employed in refrigeration. This course includes icemaking, cold storage, and the further adaptation of refrigeration to the arts.

Text: Mechanical Refrigeration, Macintire.

421 Hydraulic Machinery. Class 2 hours. Credit 2.

Prerequisite: C. E. 312.

Elective for Seniors in M. E. and E. E. second semester.

Theory, design, construction and installation of water wheels, pressure engines, and of modern hydraulic turbines, and a study of their characteristics with a view to intelligent selection of the proper type and size for any given set of conditions. Water power development.

Text: Hydraulic Turbines, Daugherty.

424 Heating and Ventilation. Class 2 hours. Credit 2.

Prerequisite: M. E. 305 or M. E. 311 second semester.

Elective for Seniors in M. E.

Required of Juniors in A. E. and Arch.

Theory and design of the various systems for the heating and ventilation of buildings; hot air, hot water, steam, and the plenum and vacuum systems. Central station or direct heating.

Text: Heating and Ventilating Buildings, Carpenter.

# DEPARTMENT OF ELECTRICAL ENGINEERING

WILLIAM CARL LANE, Professor CHARLES JOE MOORE, Instructor

The course in electrical engineering is designed to give the student a thorough training in the fundamental principles of electricity and in their application to the problems of the engineer. The successful electrical engineer must have a broad general engineering training in addition to his training in electricity; hence, the student is required to take a number of subjects in the other departments of the School of Engineering. These include applied mechanics, heat power engineering, refrigeration, hydraulics, strength of materials and several other of the allied engineering branches.

The first two years of the course are devoted to the fundamental subjects. During this period the student receives a care-

ful training in English, mathematics, chemistry, physics, drawing, surveying and shop practice.

The electrical engineering work proper begins in the Junior year. A course which extends throughout the year deals with the principles of electrical engineering, and takes up in detail direct current machinery, electric wiring and illumination. All courses include laboratory work of a practical nature. The Senior year's work includes a detailed study of alternating current machinery, electric power plant design, electric power transmission and telephony. Laboratory practice in alternating currents includes testing of generators, motors, synchronous converters, transformers, rectifiers and meters. The work in power plant design includes the design of a plant for some city with which the student is familiar. Care is taken to coordinate all work of the classroom with the work of the laboratory.

The dynamo laboratory, located on the first floor of the Engineering Building, is equipped with modern direct and alternating current generators and motors, synchronous converters, transformers, rectifiers, arc lamps, starting devices and switchboards. An ample supply of voltmeters, ammeters, wattmeters, tachometers and other necessary measuring instruments is provided. The laboratory equipment is representative of modern practice. No machines are wired up permanently. The students of each class are required to wire up the machines and adjust them for best operation before performing an experiment. At the close of a test all wires are disconnected.

The battery room and the calibrating laboratory are adjacent to the dynamo laboratory. The former contains a 90-cell storage battery for supplying energy for calibrating purposes, a battery for operating the College bell system, and other experimental batteries. The latter is equipped with a Leeds-Northrup potentiometer and standard shunts, a standard Weston voltmeter, a Weston indicating wattmeter and the other necessary auxiliary apparatus for calibrating both laboratory and commercial instruments.

Modern telephone apparatus is provided for use in connection with the course in telephony. A darkroom is equipped with a Leeds-Northrup photometer of the latest type, and is devoted exclusively to photometric work.

# **SUBJECTS**

# Electrical Engineering

303 Direct Current Machines. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Phy. 202; Math. 208. A study of direct current machinery.

Text: Elements of Electrical Engineering, Franklin and Esty (Vol. I).

304 Direct Current Machines. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: E. E. 303. A continuation of E. E. 303.

Text: Elements of Electrical Engineering, Franklin and Esty (Vol. I).

308 Dynamo-Electric Machinery. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 202; Math. 208.

A study of dynamo-electric current machinery.

Text: Essentials of Electrical Engineering, Wilson.

401 Alternating Current Machines. Class 4 hours, laboratory 6 hours. Credit 6.

Prerequisite: Math. 208; E. E. 302, 304.

A study of the fundamentals of alternating currents and their application to alternators, transmission lines, synchronous motors and conversion apparatus.

Text: Principles of Electrical Engineering, Franklin and Esty (Vol. II).

**402 Alternating Current Machines.** Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: E. E. 401.

A continuation of E. E. 401. A study of transformers and alternating current motors.

Text: Principles of Electrical Engineering, Franklin and Esty (Vol. II).

403 Telephony. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: E. E. 301 and 302.

Theory and practice in telephony.
Text: American Telephone Practice, Kempster B. Miller.

404 Electric Power Transmission. Class 2 hours. Credit 2.

Prerequisite: E. E. 401 or 407.

Includes generation, transmission, distribution and utilization of power by electrical process.

Text: Elements of Electrical Transmission, Ferguson.

405 Electrical Machine Design. Class 1 hour, designing and drafting 3 hours. Credit 2.

Prerequisite: E. E. 304.

Theory and design of a dynamo.

Text: Electrical Machine Design, Gray.

406 Electric Power Plants. Class 1 hour, designing and drafting 3 hours. Credit 2.

Prerequisite: E. E. 401 or 407.

Theory and practice in the design of the electrical equipment of a power plant and a distribution system.

407 Dynamo-Electric Machinery. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: E. E. 308. A continuation of E. E. 308. Text: Same as E. E. 308.

410 Electric Railways. Class 2 hours. Credit 2.

Prerequisite: E. E. 401 or 407.

A study of electric railway apparatus and of the best practice.

Text: The Electric Railway, Buck.

411 Wiring and Illumination. Class 2 hours. Credit 2.

Prerequisite: Phy. 202.

Theory and practice in the design of the lighting and wiring of buildings, and of the wiring of electrical apparatus in general.

412 Dynamo-Electric Machinery. Class 2 hours. Credit 2.

Prerequisite: Phy. 202 and Math. 208.

A brief course in direct and alternating current machinery.

# DEPARTMENT OF CIVIL ENGINEERING

ALFRED BOYD, Professor J. W. Evans, Instructor

The work of the civil engineer includes highway and railroad location and construction, municipal improvement, hydraulic, sanitary and structural engineering. The purpose of the instruction in this department is to give a training sufficiently broad and comprehensive to fit a student to enter any line of civil engineering practice.

Highway construction is of increased importance, and this fact is recognized by the emphasis placed upon that part of the training which prepares men for this work.

The problems of water supply and sewage disposal are being brought to the attention of almost every community in Oklahoma. The training of city managers who have to deal with these and other municipal problems is identical with that of a well equipped civil engineer.

This department is well supplied with the instruments needed for a thorough course in surveying, including surveys for highways, railroads, drainage and irrigation projects, and geodetic work. In the course in bridge and structural design, careful study is made of the theory of stresses, and practice given in the actual designing of wood, steel and concrete structures.

The testing laboratory contains all of the machines usually found in a well equipped laboratory for the testing of structural materials. Opportunity is offered for laboratory study of cement and concrete. The machines for the testing of road materials conform to the standards of the United States Office of Public Roads.

Class instruction in hydraulics is supplemented by work in the hydraulic laboratory. Measurements of flow are made for weirs, nozzels, pipes and flumes. Tests of a Pelton wheel, of a centrifugal pump, and of water meters and field measurements by means of a current meter are also made. A thorough training in hydraulics is necessary to deal with problems in water supply, irrigation, and hydraulic development.

In addition to the work in mathematics, physics and chemistry required of all engineering students, certain courses adapted to the needs of civil engineers are required. Spherical trigonometry is given in the Sophomore year, and an opportunity to elect least squares in the Junior and Senior years. Geology and minerology are required subjects. They have a direct bearing upon the study of road and building materials. A course in sanitary biology is offered by the Department of Bacteriology and is of special importance for a clear understanding of sewage disposal and water supply. A course in steam and gas engineering and one in dynamo-electric machinery, given by other departments, are especially adapted to the needs of civil engineering students.

The drafting room for this department is well equipped and well lighted. There is a good collection of working drawings and designs, representing standard practice in different fields of engineering, which are used for reference in several of the courses.

# **SUBJECTS**

201 Elements of Surveying. Fieldwork 3 hours. Credit 1.

Care, use and adjustment of the transit and level. Traversing, leveling, making of profiles, keeping of field notes.

Students who are taking the Reserve Officers Training course can obtain in this course in surveying the necessary field practice in military topography, map reading and military sketching. These students will use as a text Sherrill's Military Topography.

203 Surveying. Class 1 hour, fieldwork 4 hours. Credit 21/3.

Prerequisite: Math. 108.

Care, use and adjustment of compass, transit, level and plane table. Leveling, traversing, topographical measurements and mapping.

204 Railway Surveying. Class 2 hours, fieldwork 6 hours. Credit 4. Prerequisite: Math. 108.

Exercises in simple, reverse and transition curves; preliminary and location surveys for a short-line railroad; cross-sections and estimates.

Text: Railroad Curves and Earthwork, Allen.

301 Applied Mechanics. Class 4 hours. Credit 4.

Prerequisite: Math. 204.

Principles of statics; theory of structures; dynamics. Text: Applied Mechanics for Engineers, Hancock.

302 Mechanics of Materials. Class 3 hours. Credit 3.

Prerequisite: C. E. 301.

Properties of materials; flexure; beams, columns, shafts.

Text: Strength of Materials, Boyd.

303 Roads and Pavements. Class 2 hours. Credit 2.

Methods of construction and maintenance of various types of roads and pavements. Road machinery and road organization.

307 Topographical Drawing. Drawing 3 hours. Credit 1.

Prerequisite: C. E. 203.

Conventional symbols, lettering, preparation of profiles and maps.

308 Testing Laboratory. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 301.

Testing of sand, cement, concrete, road materials.

309 Higher Surveying. Class 2 hours, fieldwork 4 hours. Credit 31/3. Prerequisite: Math. 205 and C. E. 203.

Determination of azimuth, latitude, longitude and time. Fieldwork in base line measurement, and triangulation.

310 Framed Structures. Class 2 hours, drawing 6 hours. Credit 4. Prerequisite: C. E. 301.

Stresses in simple structures; graphical analysis; elements of design.

312 Hydraulics. Class 3 hours, laboratory 2 hours. Credit 33/3.

Prerequisite: Math. 204-208.

Fundamental principles and their application; laboratory determination of coefficients.

Text: Textbook of Hydraulics, Russell.

314 Railway Engineering. Class 2 hours. Credit 2.

Methods of construction and maintenance of roadbed and structures; surveys and estimates; organization; signaling; economic theory as applied to location and operation.

401 Structural Design. Class 1 hour, drawing 6 hours. Credit 3.

Prerequisite: C. E. 310.

Design of structures of wood and steel, and of reinforced concrete as applied to buildings.

402 Concrete Structures. Class 1 hour, drawing 3 hours. Credit 2.

Prerequisite: C. E. 302.

Designing of retaining walls, dams and reinforced concrete arches.

403 Irrigation. Class 2 hours. Credit 2.

Prerequisite: C. E. 312.

Capacity of canals; surveys; sources of supply; design of structures; methods of applying water; irrigation law.

404 Sewerage and Drainage. Class 2 hours. Credit 2.

Prerequisite: C. E. 312.

Design and construction of sewerage systems; modern methods of sewage disposal; methods of drainage.

407 Testing Laboratory. Laboratory 3 hours. Credit 1.

Prerequisite: C. E. 302.

Laboratory examinations of the various materials of construction.

408 Thesis. Laboratory 6 hours. Credit 2.

Original investigation of some engineering subject.

411 Steel Construction. Class 2 hours. Credit 2.

Prerequisite: C. E. 301.

Steel frame construction of buildings and its application to modern fireproof work.

Text: Steel Construction, Burt.

413 Water Supply. Class 2 hours. Credit 2.

Prerequisite: C. E. 312.

Sources of supply. Design, construction and maintenance of waterworks systems. Methods of purification.

Text: Public Water Supplies, Turneaure and Russell.

415 Reinforced Concrete. Class 2 hours. Credit 2.

Prerequisite: C. E. 301.

Theory and practice in the design of reinforced concrete.

Text: Reinforced Concrete Construction, Hool.

# DEPARTMENT OF ARCHITECTURE

F. W. Redlich, Professor C. H. Cowgill, Instructor

The courses offered by the department divide themselves into two groups. Both are full professional courses extending over four years. Course I is open to all students studying architecture; Course II for those studying architectural engineering.

#### Courses I and II

The schedules of Courses I and II conform to the standard minima of the Associated Collegiate Schools of Architecture.

It is the purpose of the department to offer the necessary training in design, construction and the allied subjects that will eventually fit the student for the practice of architecture, and will also enable him upon graduation to be of immediate value as a draftsman. With this end in view, the course of study combines with the strictly professional work the essentials of a liberal education, aiming to give the student as broad a foundation as possible for his future work. The number and scope of the subjects to be covered during the course make it necessary that the student start his architectural work at the beginning of the Freshman year.

The two courses in architecture and architectural engineering run very nearly parallel for the first two years in order to give the student an opportunity for careful investigation before making a choice. At the beginning of the third year the line of demarcation between the professional work of the two options becomes more marked, and in the fourth year it is very sharply defined, but the general subject common to both options, which continues through the four years, emphasizes the close relationship between the two courses.

The work in design is started after the courses in descriptive geometry, shades and shadows and perspective, and the elements of architecture have given the student a good foundation. During the Sophomore year problems in design are taken involving the use of the orders and other elements in order to train the student in sense of correct form and proportion.

In the Junior and Senior years, plan problems are given and the entire composition of buildings is studied. A series of lectures on the elements and theory of architecture accompanies this work, and frequent sketch problems are given in order to develop rapidity of thought and presentation.

Students in architecture devote 25% of the entire course to design; for those taking architectural engineering, design is decreased to 15%, but 34% of their course consists of engineering studies and advanced construction. Throughout all years of the course in architecture runs some form of freehand drawing, the

basic nature of which cannot be overestimated. The history of architecture possesses a cultural as well as a technical value, for its prevailing styles reflect great movements of civilization among races—their migrations, conquests, commercial, social and religious changes. The study of history of architecture commences in the Sophomore year, and with the attendant subjects of ornament, painting and sculpture, continues through the balance of the course in architecture. Students in architectural engineering take less freehand drawing and history than those in architecture. The Freshman year of both courses being alike, ample opportunity is afforded for careful investigation before making a choice.

Of foreign languages, French is the most useful to the architect, and should, therefore, be preferably offered for entrance, and next to it in utility is German. The technical terms employed in architecture are largely French, and where the entrance requirement has been met by the offer of another language, it is desirable that the student take some French after matriculation.

During the summer vacation architectural students are expected to spend as large a part of their time as possible in the offices of practicing architects, and it has been found that those men who regularly follow this plan make the greatest advancement in college work.

The equipment of the architectural lecture room includes a Bausch & Lomb "Universal Balopticon" for the projection of slides and plates, and a carefully selected collection of lantern slides. The drawings, books and journals in the architectural library are freely accessible to students during working hours, but must not be removed from the departmental reading room without special permission, which, however, is readily given for cause. The drafting rooms are provided with "Economy" drawing tables of a type adopted as standard by the department; these have ample drawer capacity for students' work and tools, a top 39 by 72 inches in size for perspectives, and loose, inclined boards 32 by 44 inches for general use.

The studio for freehand drawing is well equipped with practical objects, still life models, simple plaster casts, casts of architectural features and sculpture.

In addition to the full four-year courses, a special course of

two years' duration is also offered to qualify men who have had sufficient experience in the office of a practicing architect to enable them to carry on the required work. No entrance examinations for this work will be required. Upon the completion of the required work a certificate of proficiency is given.

# Landscape Architecture

For the benefit of those desiring special training in this line of work, an elective course is offered, consisting of six hours a week of drafting. This is open to students of any department and will be adapted to their individual requirements.

## **SUBJECTS**

105 Elements of Architecture. Drafting 4 hours. Credit 11/3.

The classic orders of architecture and elementary studies in composition, with drawings rendered in india ink.

106 Elements of Architecture. Drafting 6 hours. Credit 2.

Prerequisite: Arch. 105.

Continuation of the orders and elementary studies in composition.

111 Descriptive Geometry. Class 2 hours. Credit 2.

A course for students in architecture and engineering. Fundamental problems involving points, lines, planes, intersections, and development of surfaces, isometric and oblique projections.

112 Descriptive Geometry. Class 1 hour, drafting 6 hours. Credit 3. For students of Architecture.

Prerequisite: Arch. 111.

The fundamental problems are applied in the delineation of shades and shadows. Perspective drawing.

116 Descriptive Geometry. Class 1 hour, drafting 4 hours. Credit 2½.

For engineering students.

Prerequisite: Arch. 111.

A continuation and practical application of Architecture 111.

211 History of Architecture. Class 1 hour, research and sketches 2 hours. Credit 1%.

Prerequisite: General History.

Origin and development of historical styles of architecture from the earliest times to the breaking up of the Roman Empire in the West. Typical examples are studied in detail, and for this purpose the lantern is in constant use. Stress is laid on the evolution of styles from changes in structural form, political and religious conditions, and national character.

212 History of Architecture. Class 1 hour, research and sketches 2 hours. Credit 1%.

Prerequisite: Arch. 201.

Continuation of the development of historical styles of architec-

ture from the Moslem irruption and the accession of Charlemagne to the opening of the Rennaisance, covering the prevailing periods of the Romanesque and Gothic.

214 Building Construction. Class 2 hours. Credit 2.

Building materials and construction. Foundations, footings and walls; stone and brick masonry; concrete, terra cotta and plastering. Fire resisting construction. Classwork supplemented by drawing and inspection of structures. Carpentrywork; properties and uses of various woods; methods of framing; mill construction; interior finish, hardware. Technical features of specifications and relation of architect, owner and contractor.

207 Drawing from the Antique. Drawing 4 hours. Credit 11/3.

Prerequisite: Arch. 114.

Work in pencil, pen and ink, and charcoal, from casts of architectural ornament, architectural fragments and parts of the figure.

208 Drawing from the Antique. Drawing 6 hours. Credit 2.

Prerequisite: Arch. 207.

Work in charcoal and pastel from casts of antique sculpture.

209 Architectural Design. Drafting 9 hours. Credit 3.

Prerequisite: Arch. 106.

A study of architectural compositions with library research. Problems in design, composition, planning, motives, details and rendering. Lectures and criticisms.

210 Architectural Design. Drafting 9 hours. Credit 3.

Prerequisite: Arch. 209.

Continuation of problems in design, composition and planning, with research, lectures and criticisms.

**301 History of Architecture.** Class 1 hour, research and sketches 3 hours. Credit 2.

Prerequisite: Arch. 202.

Conclusion of the analytical study of the development of architecture from the inception of the Rennaissance to modern times. During the latter part of the semester particular attention is given to architectural development in the United States.

302 Historic Ornament. Class 1 hour, research and sketches 3 hours. Credit 2.

Prerequisite: Arch. 301.

Analysis and study in detail of some of the great historic styles of decoration, with a brief outline study of the development of mosaic, ceramics, stained glass, ornamental metal work, textile fabrics, furniture and other minor arts.

303 Applied Mechanics. Class 2 hours. Credit 2.

A course in kinematics, kinetics and statics for architectural students and others who have not had the calculus.

304 Strength of Materials. Class 2 hours. Credit 2.

Prerequisite: Arch. 303.

Continuation of the course in mechanics for students who have not taken the calculus. Graphical methods of determining the elastic curve of beams; centroids and moments of inertia of areas; beams and columns; properties and tests of building materials. 305 Plumbing and Drainage. Class 2 hours. Credit 2.

Plumbing systems and fixtures; water supply and filtration; sewage disposal and general sanitation.

307 Water Color Painting. Drawing 3 hours. Credit 1.

Prerequisite: Arch. 208.

Work from architectural casts and from still life. Outdoor sketching.

308 Water Color Painting. Drawing 3 hours. Credit 1.

Prerequisite: Arch. 307.

Given with special reference to conventional and sketch rendering of architectural subjects. Out-of-door sketching.

309 Working Drawings and Estimates. Drafting 6 hours. Credit 2. Prerequisite: Arch. 210.

Under such limitations as a client would be likely to impose, the student prepares working drawings, specifications, typical details and estimates for a residence of his own design.

310 Advanced Working Drawings. Drafting 9 hours. Credit 3.

Prerequisite: Arch. 309.

Continuation of 309. Working drawings of public buildings, office buildings, etc.

311 Architectural Design. Drafting 12 hours. Credit 4.

Prerequisite: Arch. 210.

Advanced problems in design, composition and planning, with research, lectures and criticisms.

312 Architectural Design. Drafting 15 hours. Credit 5.

Prerequisite: Arch. 311.

Continuation of advanced problems in design, composition and planning, with research, lectures and criticism.

313 Drawing from the Antique. Drafting 6 hours. Credit 2.

Prerequisite: Arch. 208. Continuation of Arch. 208.

314 Drawing from the Antique. Drafting 6 hours. Credit 2.

Prerequisite: Arch. 313.

Work in water colors and oils from the casts of antique sculpture.

321 Water Color Rendering. Drafting 3 hours. Credit 1. Prerequisite: Arch. 308.

322 Pen and Ink Rendering. Drafting 3 hours. Credit 1. Prerequisite: Arch. 207.

Architectural sketching in pen and ink.

410 Interior Design and Decoration. Drafting 9 hours. Credit 3.

Simple design problems for woodwork, including mantles, book-cases, cabinets, doors and windows, staircases, halls, drawingrooms. Use of materials. Wall decorations in color.

417 Landscape Architecture. Drafting 6 hours. Credit 2.

This course is elective to students of all departments, and can be arranged to suit their special needs.

409 House Planning. Class 2 hours, laboratory 4 hours. Credit 31/3.

Study of floor plans which create conditions favorable to simple housework and to effective decoration. Principles of planning, construction, plumbing, and estimates of costs. Correcting and drafting of a cottage plan; planning and drafting a simple dwelling house.

401 History of Painting and Sculpture. Class 1 hour. Credit 1.

Illustrated lectures on the history of painting and sculpture, with special reference to architectural design.

412 Archaeology. Drafting 4 hours. Credit 11/3.

Prerequisite: Arch. 301.

This course offers an opportunity to obtain more exact knowledge of certain styles. Design problems, especially details in some of the more important styles, are given.

406 Seminar. Class 1 hour. Credit 1.

Professional ethics and practice. Reports, lectures and discussions on selected topics.

407 Architectural Design. Drafting 21 hours. Credit 7.

Prerequisite: Arch. 312.

Extended problems in design, composition and planning, with research and criticism.

408 Architectural Design. Drafting 21 hours. Credit 7.

Prerequisite: Arch. 407.

Continuation of Arch. 407. During the latter half of the semester a single major problem is studied and worked up in detail as a thesis problem.

#### DEPARTMENT OF SHOP PRACTICE

DEWITT HUNT, Superintendent of Shops F. R. Bradley, Assistant E. D. Soderstrom, Assistant

The work in the shops is intended to serve (1) Students of engineering who require training in the methods of modern shop processes, and the principles underlying efficient production; (2) students of other divisions of the College who need a less extensive training in shop work; (3) those who expect to become teachers of manual training and of vocational subjects; (4) students, not of collegiate grade, who are seeking intensive training along some vocational line.

The most remarkable achievement in shop practice in the last decade has been the reduction of each tool process to its simplest and most usable form. All of the courses in shop practice are organized for the purpose of presenting the recognized elemental tool processes, and are intended to cover nearly all the general processes in each division. Lectures are given each week in every course, outlining some important phase of the work to be covered.

# Shop Work

Shop 101 Wordworking. Shop practice 4 hours. Credit 11/3.

Required of Freshmen in M. E., E. E. and C. E. first semester.

The student in this course is required to make a graded set of exercises in woodwork and receives practice in the use and care of hand tools. One-half time is given to wood turning, and during the latter part of the semester patternmaking is taken up.

Shop 104 Patternmaking. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 101.

Required of Freshmen in M. E. and E. E. second semester.

The student in this course is required to make a graded set of wood patterns. As far as possible all exercises are selected from designs of machines to be built in the shops. The course also includes core box construction. Lectures are given on pattern shop equipment and on special woodworking machinery.

Text: Wood Patternmaking, Purfield.

Shop 106 Carpentry Construction. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 101.

Required of Freshmen in C. E. and A. E. courses, second semester.

The purpose of the work in this course is to familiarize the student with types of framing construction in use in houses of moderate cost. Foundations, sills, studding, plates, roof framing, wall covering, and house finishing will be taken up. The class during the latter part of the semester will build a garage or some small building.

Text: Carpentry, Griffith.

Shop 108 Farm Carpentry. Shop practice 3 hours. Credit 1.

Required of Freshmen students in Agriculture.

A course in toolwork suitable for farm use, embracing sawing and planing to dimensions, fastening with nails and screws; the elements of framing and the cutting of rafters.

Shop 202 Forge Shop. Shop practice 4 hours. Credit 11/3.

Required of Sophomores in M. E., E. E. and C. E. second semester.

The student is required to make a graded set of forgings and the various types of welds. Tool dressing, hardening and tempering, casehardening, and the heat treatment of carbon and high-speed tool steels is performed by the student. Lectures are given on the study of wrought metals and on heat treatment.

Text: Forge Practice, Bacon.

Shop 203 Fourdry. Shop practice 4 hours. Credit 11/3.

Required of Sophomores in M. E., E. E. and C. E. first semester.

The student is required to make a graded set of molds of patterns which, for the most part, are to be used on machines or apparatus that is to pe built in the shops. Preparation and charging the cupola, pouring off heats and mixing and baking cores. Lectures are given on modern foundry practice.

Text: Elementary Foundry Practice, Richards.

Shop 205 Agricultural Forging. Shop practice 3 hours. Credit 1.

Required of Sophomore students in Agriculture.

The work in this course covers the shaping and welding of steel, the forging of farm machinery parts, drilling metals and other problems in forging adaptable to farm needs.

Shop 301 Machine Shop. Shop practice 4 hours. Credit 11/3. Required of Juniors in M. E. and E. E. first semester.

Shop 302 Machine Shop. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 301.

Required of Juniors in M. E. and E. E. second semester.

Shop 401 Machine Shop. Shop practice 4 hours. Credit 11/3.

Prerequisite: Shop 302.

Required of Seniors in M. E. first semester.

The student in these courses is required to make a graded set of machine parts. As far as possible all exercises are selected from designs of machines that are to be built in the shops. Lectures are given on the art of cutting metals.

Text: Machine Shop Practice, Kaup.

# Manual Training for Teachers

These courses are arranged for students in any division of the College who desire to fit themselves for teaching manual training. Advanced work is given in the following courses: Shop 101 and 104, Patternmaking; Shop 202, Forging; Shop 203, Foundry; Shop 301 and 302, Machine Shop.

M. T. 101 Benchwork. Shop practice 6 hours. Credit 2.

Prerequisite: Woodwork 11 and 12, or their equivalent.

This course covers the use of hand tools, the making of exercises involving planing, screw construction, curve forming, the dado joint and its various applications in half-lap construction, and includes elementary wood finishing.

Text: Essentials of Woodworking, Griffith.

M. T. 102 Cabinetmaking. Shop practice 6 hours. Credit 2.

Prerequisite: Woodwork 11 and 12, or Benchwork 101.

The application of the use of woodworking machines is made in the completion of a class project involving mortise and tenon joints and paneling.

Text: Woodwork for Secondary Schools, Griffith.

M. T. 103 Mechanical Drawing. Drawing 4 hours. Credit 11/3.

This work is arranged for those who expect to teach. A series of problems arranged suitably in pedagogical sequence is given. The making of working drawings, tracings and blueprints, machine details and assembled drawings make up the subject matter of this course.

Text: Applied Mechanical Drawing, Matthewson and Stewart.

M. T. 106 Mechanical Drawing. Drawing 4 hours. Credit 11/3.

For Manual Training teachers.

A study of orthographic projections, development of surfaces, intersections, isometric projections, and a brief study of house planning. This course is planned to give the high school manual training teacher a general view of the field of mechanical drawing.

Text: Applied Mechanical Drawing, Matthewson and Stewart.

M. T. 201 Advanced Wood Turning. Shop practice 4 hours. Credit 11/3.

Prerequisite: For credit Woodwork 21.

Practice in fancy turning, involving gluing up stock for spindle turning, faceplate turning of cups, trays, covered boxes, table legs, spiral turning and mandrel work.

M. T. 202 Art Forging. Shop practice 4 hours. Credit 11/3.

Prerequisite: Forging 201.

An advanced course in forging, adapting the work to the needs of a high school forge shop where a large proportion of interest in the work is necessary.

Text: Art Forging, Googerty.

M. T. 301 Care of Shop Equipment. Lecture and Shop practice 2 hours. Credit 3/3.

Lectures and practice involved in the care of shop tools, saw-filing, sharpening of edge tools, care of machines and installation of shop equipment will be given in this course.

M. T. 302 Method of Organization in Manual Training. Lecture 2 hours, practice 2 hours. Credit 2%.

Lectures on methods of teaching and organization of the subject matter are given each week, and students are required to assist in shop classes two hours each week for practice teaching.

M. T. 303 Furniture Design. Class 2 hours. Credit 2/3.

Prerequisite: Mech. Draw. 11 and 12.

This is primarily a course in drawing in which the student designs pieces that may be made in the shop. The designing is done from a standpoint of adapting the model to shop classes. A tracing is kept of each piece designed and an exchange of shop drawings thus established. Students may make blueprints from any of these tracings and thus go out with a well established, graded set of models.

## PETROLEUM TECHNOLOGY

CHAS. K. FRANCIS, Professor

This is a special course the purpose of which is to train men for positions in the petroleum industry. There is a great demand for young men properly prepared, so that those who complete the work have no difficulty in securing positions at good salaries. It is advisable that those who propose to elect this course should have previous work in chemistry and physics, and if possible

should have had the first courses in surveying, drawing and the elements of mechanical engineering.

It is not possible in a course of this nature to develop an expert; the main purpose is to lay the foundation which should be sufficient for subsequent specialization.

201 Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Chem. 102.

The subject is presented by means of lectures, Government and State publications and textbooks. The chief topics considered are the origin, physical and chemical properties of petroleum; structural geology; prospecting and the study of maps. In the laboratory the subject of specific gravity is studied in detail; numerous determinations are made by direct and indirect methods, paying particular attention to the hydrometer and the Westphal balance when examining oils. The balance and the effusion apparatus are used for teaching methods for determining specific gravity of gas. Other physical tests of petroleum and petroleum products include viscosity, cold test, flash and fire points, and the distillation tests. Special chemical tests are made for acidity, sulfates and chlorides. The character of rocks and sands is determined by means of reagents.

202 Class 2 hours, laboratory 3 hours. Credit 3.

A continuation of 201. The main subject includes factors in drilling for oil and gas, production, refining, testing and specifications. The natural gas and gasoline industry. A number of inspection trips are made to Oklahoma oil fields, refineries and special products plants. The subject of refining of petroleum is studied, oils are refined and the products examined in the laboratory. Among the determinations made in this semester, those of sulfer, asphalt and parafin may be mentioned. Calorimeter work is introduced, and the fuel values of oils and gases are determined. Meters and other special instruments are tested. Gas analyses are made and the interpretations studied.

# ENGINEERING SHORT COURSES

(Non-Collegiate)

These are practical courses, twelve weeks in length, adapted to the special needs of men in certain lines of work. Their purpose is to enable men to obtain instruction which will fit them for certain vocations, and to enable those who are already employed to increase their efficiency by additional training.

Students seeking entrance to these courses must be at least seventeen years old and must have completed the eighth grade of public schools. No work taken in the short courses will be counted as college credit.

The instruction given in these courses will include the following:

Mechanical drawing, the use of instruments, training in the

making and reading of shop drawings. Woodwork, benchwork, framing, and the use of woodworking machines. Forging, including the use of tools, welding and hardening. Automobile operation, construction, and repair, including a study of gas engines, ignition and lighting systems; plumbing and pipefitting, elementary electrical work.

# THE SCHOOL OF HOME ECONOMICS

RUTH MICHAELS, Dean

Courses of study in home economics have been developed as a result of social and economic changes. These changes have created a demand for an education which will prepare young women to be more serviceable in their homes and communities. In keeping with these ideas, the course includes those subjects which will make not only specially trained workers, but also broadly educated young women.

Many opportunities are open for young women who are trained along these lines. In the teaching profession, openings are found in city schools, consolidated and rural schools, and provision is made at the College for special training in this work. In other lines, aside from teaching, there are many openings for young women as designers, house furnishers and decorators; in the extension field; and as managers in various institutions.

The School of Home Economics offers the following work:

- 1. Courses during Farmers Week for the women who are interested in the study of household problems, and who cannot regularly enroll for college attendance. Work of the following type will be handled by lecture, laboratory and demonstration methods: Feeding of various groups of people; methods of preparation and service of these foods; household sanitation; house furnishing, house decoration; selection of materials for clothing; cutting and making garments.
- 2. Food and textile courses for teachers during the Summer School which will enable teachers to prepare themselves for the certificate examinations in these subjects, and which will also help them in planning courses of study, in the selection of equipment, and in the arranging of a laboratory for their schools. These courses will also include a discussion of the current problems arising in the field of home economics.

The purpose of the short course is to provide in the limited

time such training as will be most helpful to the students entering the course.

3. A four-year course, leading to the degree of Bachelor of Science. This course of study is planned for those young women who wish, (1) to combine the study of home problems and related arts and sciences with the academic work; (2) to become teachers of home economics; (3) to follow the work as dietitians; as directors of institutions; or in various commercial lines.

#### COURSES IN THE SCHOOL OF HOME ECONOMICS

The following outline of study represents the required and elective work in the School of Home Economics. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subjects and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Sophomore, three hundred for Junior and four hundred for Sophomore, dred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits exclusive of any credits given in physical education. Students will not be allowed to register in less than twelve nor more than twenty credit hours.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work,

#### FRESHMAN YEAR

SECOND SEMESTER

FIRST SEMESTER

FIRST SEMESTER			SECOND SEMESTER		
	Irs. (4)	Cr. 3 1-3		rs.	Cr.
H. E. 105, Hand sewing2 Chem. 101, General	(4)	4 1-3	H. E. 106, Elementary Dressmaking	(4)	3 1-3
Eng. 101, College 3	` ' '	3	Chem. 102, General 2	(4)	3 1-3
Eng. 101, College	(4)	3 1-3	Eng. 102, College 3		3
Draw. 101, Freehand	(4)	1 1-3		(4)	3 1-3 1 1-3
H. E. 103, Survey 2 Physical Education	(3)	1	Pub. Spk. 123, Essentials	(4)	1 1-3
a my broad and and and and and and and and and a	(0)	-	of Public Speaking 1	(2)	1 2-3
			Physical Education	(3)	1
	SOI	РНОМО	RE YEAR		
FIRST SEMESTER			SECOND SEMESTER		
H	Irs.	Cr.	H	rs.	Cr.
H. E. 203, Food Study 2	(4)	3 1-3		(4)	3 1-3
Chem. 207, Qualitative	(3)	2	Chem. 208, Food	(6)	3
Analysis		3	Chemistry 1 H. E. 206, Advanced	(6)	3
Phy. 201, Advanced 3	(2)	3 2-3	Textiles2		2
Eng. 201, Advanced			Hist. 204, Industrial		2
Composition			History of U. S		3
Eng. 203, News Writing 2		2	Composition		
Fr. 101			or		
Ger. 101 3		2	Eng. 204, News Writing 2 Fr. 102		2
Physical Education	(3)	3	or		
	(0)	•	Ger. 102 3		3
			Physical Education	(3)	1
JUNIOR YEAR					
FIRST SEMESTER			SECOND SEMESTER		
H D cor D 15: 1	Irs.	Cr.	Hr Bass Bass Bass Bass Bass Bass Bass Bas		Cr.
H. E. 305, Food Study 2 H. E. 307, History of	(4)	3 1-3		(4)	3 1-3
Costume		2	H. E. 308, Clothing Appreciation	(6)	2
H. E. 309, Drafting &			H. E. 310, Advanced	,	
Modeling Bact. 303, Household 2	(4)	1 1-3	Dressmaking	(4)	1 1-3
Eng. 207, English	(4)	3 1-3	Econ. 308, Business for Women 2		2
Literature 3		3	Eng. 208, English		-
Electives 3		3	Literature 3		3

Electives .....

#### SENIOR YEAR

FIRST SEMESTER			SECOND SEMESTER	
A1. 400 TT	Hrs.	Cr.		rs. Cr.
Arch. 409, House Planning	2 (4)	3 1-3	H. E. 404, House Furnishing	(4) 21-3
H. E. 407, Dietetics		3 1-3 3 1-3	Education	(4) 3 1-3 (4) 3 1-3
H. E. 411, House Administration H. E. 413, Advanced	2	2	H. E. 410, Sanitation 2 H. E. 412, Millinery H. E. 414, Art Needlework.	(2) 2-3 (4) 1 1-3
Tailoring Electives	3 (4)	1 1-3 3	Electives	2

#### FOODS, COOKERY AND HOME MANAGEMENT

RUTH MICHAELS, Professor EDITH COFFMAN, Instructor

The department has well equipped office, laboratories and lecture room in the Woman's Building. The food laboratory is finished in white enamel, has built-in desks fitted with electric plates and individual equipment. Adjoining this laboratory are store rooms and dining room; the latter furnished in attractive style, is used in connection with the planning and serving of meals. In the library may be found splendid reference books and bulletins. as well as the technical magazines.

## SUBJECTS

103 Introductory Survey. Class 2 hours. Credit 2.

A lecture course covering the essential points in hygiene, nutrition, dress and surroundings, as applied to the student's life; a study of women's education with special reference to home economics and the vocations opening in this field.

203 Food Study. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Chem. 102; Zool. 102.

This course introduces the scientific and economic study of foodstuffs. The work in the laboratory consists of experimental study of food processes as applied to the various foods, and these are illustrated by the preparation and combination of simple foods.

Food Study (continued). Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 203.

Continuation of Home Economics 203. Text: Chemistry and Use of Food Products, Bailey.

305 Advanced Food Study, Class 2 hours, laboratory 4 hours. Credit

Prerequisite: H. E. 204; Chem. 208.

Advanced food study is a continuation of the work of the Sophomore year and makes application of the food principles in more elaborate cookery. Work in marketing and in planning, preparation and serving for simple and formal occasions is also given. Emphasis is placed on inexpensive, practical menus for the home.

306 Advanced Food Study. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: H. E. 305; Phys. 201. Continuation of Home Economics 305.

Text: Food Products, Sherman.

405 Home Economics Education. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: All preceding work in the School of Home Economics.

Course is designed for students intending to teach home economics: Lectures and conferences on courses of study; equipment and maintenance of the work, as well as observation, demonstration and practice classes are required.

406 Home Economics Education. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 405.

Continuation of Home Economics 405.

Text: Methods of Teaching Home Economics, Kinne; Domestic Art in Women's Education. Cooley.

407 Dietetics. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 306.

Study of foods as related to feeding of individuals and groups under varying conditions of health and environment; includes study of metabolism of foods, of dietary standards, and preparation of various dietaries.

408 Dietetics. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: H. E. 407.

Continuation of Home Economics 407.

Text: Manual of Dietetics, Rose; Nutrition and Dietetics, Hall.

409 Household Administration. Class 2 hours. Credit 2.

Prerequisite: H. E. 306 and 206; Econ. 308.

This course is planned to acquaint the student with a scientific and working knowledge of the problems of household management.

410 Sanitation. Class 2 hours. Credit 2.

Prerequisite: Bact. 303.

Study of conditions which determine the healthfulness of house, and the application of principles of sanitation to its care. Special attention is given to care of the sick and to study of methods for prevention of diseases.

Text: Home Nursing, MacDonald.

## TEXTILES, CLOTHING AND SHELTER

NORA A. TALBOT, Professor MILDRED V. TALBOT, Instructor HELEN A. WENTWORTH, Instructor

The department is located in the east wing of the Woman's Building, and has well equipped sewing laboratories, locker room and office. The laboratories are furnished with sewing tables, sewing machines, electric irons, dress forms, drafting systems, looms, illustrative material, and textile exhibits.

The following courses in Textiles, Clothing, and Shelter have a two-fold aim:

The first is to develop skill in sewing, in application of good design, in choosing clothes, styles, and materials, and the application of the foregoing to practical problems in clothing.

The second, that of a professional aim, added to the first, is the study of subject matter, processes and projects, teaching possibilities, methods of presentation and class management through practice teaching.

## **SUBJECTS**

105 Sewing and Textiles. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

Study of textile fibers and fabrics; care and repair of clothing. Making of undergarments.

Text: Textiles, Woolman and McGc ven.

106 Elementary Dressmaking and Tailoring. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{3}$ .

Prerequisite: H. E. 105.

Projects and processes of elementary dressmaking and tailoring.

206 Advanced Textiles. Class 2 hours. Credit 2.

Prerequisite: H. E. 106; Chem. 102.

Study of textile manufacture from fiber to fabric, standard and fancy weave, and prices of fabrics. Testing fabrics for pure or adulterated materials. The organization of subject content and methods of teaching the same.

307 History of Costume. Class 2 hours. Credit 2.

Prerequisite: H. E. 206.

This course includes a survey of ancient costume, its development through modern times, its relation to social and political conditions.

308 Clothing Appreciation. Laboratory 6 hours. Credit 2.

Prerequisite: H. E. 307.

Study of dress from an economic, hygienic and artistic standpoint. (To run parallel with H. E. 310.)

309 Drafting and Modeling. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 308.

Course includes drafting of garments, alteration of patterns, study of line and form, making of tight-fitted lining and fancy waist. Modeling in paper a dress for use in Home Economics 310.

310 Advanced Dressmaking. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 309.

Problems include modeling and making afternoon gown and evening dress.

404 House Furnishing. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: H. E. 410.

Furnishing a house from an economical, sanitary and attractive standpoint.

412 Millinery. Laboratory 2 hours. Credit 3/3.

Prerequisite: H. E. 206 and 308.

A study of hats, the styles and shapes most becoming; frames, bows and trimmings. Renovation of materials and making over hats.

413 Advanced Tailoring. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 206 and 308.

Problems include tailored models and a tailored suit.

414 Art Needlework. Laboratory 4 hours. Credit 11/3.

Prerequisite: H. E. 206.

The ornamental stitches are given in making a sampler, and their application to various articles.

## THE

# SCHOOL OF SCIENCE AND LITERATURE

L. L. LEWIS, Dean

The courses in the School of Science and Literature offer a sound basis for training in mathematics, chemistry, physics, biological sciences and in the languages. It is also becoming more and more evident that one's education should include some work in history, social science and in economics. These related subjects give a better understanding of one's duties and responsibilities as a citizen, and a broad and liberal view of the relations of the individual to society.

The work of the school is presented to the prospective student along three lines. The Freshman year is the same for those electing the General Science and the Exact Science work. For those electing the General Literature course, Zoology and a free elective may be substituted for the mathematics of this year. With this minor difference in the Freshman year, the differentiation of the work in the three divisions appears in the Sophomore year. First. the general science work, where biological and chemical sciences represent a large part of the science work offered; second, the exact science work, represented largely by mathematics, physics and chemistry; and third, in the general literature division, where work in English and the foreign languages represents a large portion of the course, but opportunities are offered for work in sociology, economics and education. Where other courses offer vocational subjects, the science and literature work, by means of groups of electives, offers special opportunities for work in either the sciences or languages. Opportunities for selecting work of this character meets the needs of students desiring a liberal education as a foundation for professional courses, as law or medicine, as well as those students who desire to secure a training that is well balanced in respect to literature, science and cultural subjects.

#### Electives

Students who elect either the exact or general science work will be permitted to substitute in either of these courses work selected from the other course, and to some extent work selected from other courses offered in the College. Such substitutions will be permitted after consultation with the Dean of the School, and approval of the Committee on Substitutions.

Electives in the general literature group are so arranged as to permit the student to elect along the following lines: Foreign language, social science, economics or science. Students should select their electives along one of these lines.

#### Relations to Other Schools

Besides the instruction given to students in the School of Science and Literature, the instructional force gives much of the collateral work offered in the other schools of the College. Other schools of the College cooperate in giving some of the work offered in the School of Science and Literature.

## Equipment

All of the departments represented in the School of Science and Literature are well equipped to give the work they offer. The laboratories are especially well equipped for scientific work in chemistry, physics, botany and bacteriology.

#### COURSES IN THE SCHOOL OF SCIENCE AND LITERATURE

The following outline of study represents the required and elective work in the School of Science and Literature. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly—two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits exclusive of any credits given in military science and physical education. Students will not be allowed to register in less than twelve nor more than twenty credit hours.

In the outline below, figures without parenthesis indicate hours of classwork; in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hrs.	Cr.	Hrs.	Cr.
Chem. 101, Inorganic 3 (4)	4 1-3	Chem. 102, Inorganic 2 (4)	3 1-3
Eng. 101, College 3	3	Eng. 102, College 3	3
Latin 101, Caesar		Latin 102, Caesar	
or		or	
Ger. 201, Advanced 3	3	Ger. 202, Advanced 3	3
Math. 105, Algebra 4	4	Math. 108, Trigonometry 3	3
Draw, 101, Freehand (4)	1 1-3	Draw. 104, Freehand (4)	1 1-3
Physical Education (3)	1	Pub. Spk. 123, Essentials	
Military Science(3)		of Public Speaking 1 (2)	1 2-3
H. E. 103, Introductory		of Public Speaking	1
Survey 2	2	Military Science(3)	

#### General Science

#### SOPHOMORE YEAR

FIRST SEMESTER			SECOND SEMESTER		
	Hrs.	Cr.		Irs.	Cr.
Chem. 201, Qualitative Analysis	(6)	4	Chem. 210, Quantitative Analysis	(6)	4
Eng. 201, Advanced Composition	(0)	7	Eng. 202, Advanced Composition	(0)	7
Eng. 203, News Writing 2		2	Eng. 204, Magazine &		
Eng. 205, Current		Ī.	Editorial Writing 2		2
Zool. 201, General 3	(4)	1 4 1-3	Oratory 202 2 Zool. 210, Comparative		2
Phy. 203, General	(3)	4		(4)	3 1-3
Pub. Spk. 201, Argumen-	(-,		Anatomy	(3)	4
tation and Debate 2 Military Science	(3)	2	Math. 204, Astronomy 2 Military Science	(3)	2
Physical Education	(3)		Physical Education	(3)	1
(Women)	(3)	1	•		

#### JUNIOR YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hr		Hrs.	Cr.
Bot. 101, General	4) 3 1-3 7) 5 1-3	Bot. 102, General	3 1-3
Ento. 202, General 3 (	2) 3 2-3	Quantitative	4
Foreign Language 3	3	Hist. 306, Industrial	2 3
		TOTOTETT WHILEMARC	

## THE SCHOOL OF SCIENCE AND LITERATURE

## SENIOR YEAR

FIRST SEMESTER	SECOND SEMESTER				
Hrs. Cr.	Hrs. Cr.				
Edu. 301, Psychology 3 3 Bact. 403, Technical 3 (4) 41-3 Zool. 401, General Biology	Edu. 302, Applied  Psychology 3 3				
Zool. 401, General Biology	Bact. 404, Immunity				
or					
Ento. 303, Horticultural Entomology	Ento. 306, A-iculture				
Of	or				
Bot. 401, Systematic	Bot. 402, Morphology				
Chem. 401, Advanced	Chem. 402. Physical				
Inorganic 3 (6) 5	Chemistry 2 (6) 4 Foreign Language 2 2 Bact. 402, Sanitary				
Foreign Language 2 2 Bact. 405, Agricultural 2 (4) 31-3	Bact. 402. Sanitary				
	Science 3				
Exac	t Science				
SOPHOL	MORE YEAR				
FIRST SEMESTER	SECOND SEMESTER				
Hrs. Cr.	Hrs. Cr.				
Eng. 201, Advanced Composition	Eng. 202, Advanced Composition				
or	or				
Eng. 203, News Writing 2 Eng. 205, Current	Eng. 204, Magazine & 2 2 Pub. Spk. 202, Oratory 2 2				
Literature 1 1	Editorial Writing				
Chem. 201, Qualitative	Chem. 210, Quantitative				
Analysis	Alld1VSIS 2 (0) 4				
Math. 207. Analytics &	Math. 208. Calculus 5 5				
Calculus 5 5	Military Science				
Calculus 5 Military Science (3) Physical Education	Physical Education				
(Women)(3) 1	(Women)(3) 1				
	OR YEAR				
FIRST SEMESTER	SECOND SEMESTER				
Hrs. Cr.	Hrs Cr				
Phy. 303, Advanced 3 (3) 4	Phy. 304, Advanced				
Chem. 305, Organic	Ouantitative Analysis 2 (6) 4				
Equations 3	Math. 302, Differential				
Foreign Language	Equations				
Pub. Spk. 201, Argumen- tation & Debate	Foreign Language				
	Hist. 306, Industrial History of U. S				
SENI	OR YEAR				
FIRST SEMESTER	SECOND SEMESTER				
Phy. 403, Advanced 3 (4) 4	Phy. 404. Advanced 3 (3) 4				
Phy. 403, Advanced	Phy. 404, Advanced				
Inorganic 3 (6) 5	Edu. 302, Applied				
Edu. 301, Psychology 3 Foreign Language 2 Chem 321 Coology 2	Psychology				
Chem. 321, Geology	Foreign Language 2				
	Psychology         3         3           Chem. 420, Teaching         1         1           Foreign Language         2         2           Math. 204, Astronomy         2         2				
General Literature					
FRESHMAN YEAR					
FIRST SEMESTER	SECOND SEMESTER				
Cham 101 Januaria Hrs. Cr.	Hrs. Cr.				
Chem. 101, Inorganic	Chem. 102, Inorganic 2 (4) 31-3 Eng. 102, College				
Latin 101, Caesar	Latin 102, Caesar				
or	or				
Foreign Language 3 3 Math. 105, Algebra	Foreign Language				
0.5	or				
Zool. 201, General	Elective				
Physical Education (3) 1	Pub. Spk. 123, Essentials				
Military Science					
Survey	Physical Education (3) 1 Military Science (3)				
2	(0)				

#### SOPHOMORE YEAR

FIRST SEMESTE	R		SECOND SEMESTER	
Eng. 201, Advanced Composition	Hrs.	Cr.	Eng. 202, Advanced Composition	. Cr.
or Eng. 203, News Writing Eng. 207, English Literature Foreign Language Hist. 201, United States Phy. 203, General Military Science Electives	3 3 3 4 (3)	2 3 3 3 4	or Eng. 204, Magazine & Editorial Writing 2 Eng. 208, English Literature 3 Foreign Language 3 Hist. 202, United States 3 Phy. 204, General 4 Military Science (3 Electives 2	2 3 3 3 4
			Electives 2	2
		OMORE	ELECTIVES	
FIRST SEMESTE	R Hrs.	Cr.	SECOND SEMESTER	C
Foreign Language Agriculture Eng. 205 Econ. 201 Chem. 321 Pub. Spk. 201	3	3 3 1 3 2 2	Foreign Language 3 Agriculture 3 Eng. 206 1 Econ. 202 3 Math. 204 2 Pub. Spk. 202 2 Phys. 201 2 (4	3 1 3 2 2
		JUNIOR	YEAR	
FIRST SEMESTE			SECOND SEMESTER	_
Eng. 303, American Literature	Hrs.	Cr.	Eng. 304, American Literature	. Cr.
or Eng. 305, Language Foreign Language Hist. 301, English History. Edu. 301, Psychology Electives	2 3 3 5	2 3 3 3 5	Eng. 306, Language 2 Foreign Language 3 Hist. 302, English History. 3 Edu. 302, Applied Psychology 3 Electives 5	2 3 3 3
	JUI	NIOR EL	LECTIVES	3
FIRST SEMESTE	-		SECOND SEMESTER	
Foreign Language	<ul><li>2 (4)</li><li>2</li></ul>	Cr. 3 2 2 3 3 1-3 2 SENIOR	Foreign Language 3 Eng. 308 2 Pub. Spk. 302 2 Soc. Sci. 304 2 Econ. 312 3 Bot. 102, General 2 Eng. 406 or 408 (alternate years) 2 YEAR	3 2 2 2 2 3
FIRST SEMESTE	R		SECOND SEMESTER	
Eng. 401, Carlyle & Ruskin Eng. 403, Romantic Movement	Hrs. 3	Cr. 3	Eng. 402, Drama	Cr. 3 3
Foreign Language or Econ. 417 Hist. 401, Modern Europe Edu. 405, Ethics	3 3	3 3	or Econ. 418	3 3
or Soc. Sci. 401	2 2	2 2	Soc. Sci. 304	2 2
		NIOR EL	LECTIVES	
FIRST SEMESTER	Hre	Cr.	SECOND SEMESTER Hrs.	Cr.
Foreign Language	3 2 2 2 (4)	3 2 2 2 3 1-3	Foreign Language 3 Pub. Spk. 304 2 Edu. 416 2 Bact. 310 2 (4)	3 2 2

Three years of a foreign language will be required below the Senior year, two of these years' work being in the same language.

#### DEPARTMENT OF ZOOLOGY AND BACTERIOLOGY

L. L. Lewis, Professor
C. H. McElroy, Assistant Professor
R. O. Whitenton, Associate Professor
E. E. Harnden, Assistant

The Department of Zoology and Bacteriology occupies quarters on the second floor of the Library Building. The equipment of microscopes, simple and compound; lanterns, microtomes, incubators, etc., is ample for the accommodation of all classes. The department is also well supplied with dissectable models and skeletons as well as charts for both physiology and zoology. The department gives not only the work in bacteriology and zoology required in the science courses, but a large amount of teaching is required in other departments, as in the Schools of Agriculture, Domestic Science, etc. The policy of the Department of Zoology and Bacteriology is to adapt the work to the needs of students coming from other schools of the College. The following work is offered by the department in the regular College courses:

#### SUBJECTS

## Zoology

102 Economic Zoology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Required of Home Economics students.

A general study of the animal kingdom with emphasis on economic value. Types of each phylum will be discussed.

201 General Zoology. Class 3 hours, laboratory 4 hours. Credit 41/3.

Required of general science, veterinary students, and is optional for general literature students.

Elective: Education.

This course deals with the classification, structure and functions of the entire animal kingdom and the important biological laws.

207 General Zoology, for Agricultural Students. Class 2 hours, laboratory 4 hours. Credit 31/3.

Required: All agricultural students.

210 Comparative Anatomy of the Vertebrates. Class 2 hours, laboratory 4 hours. Credit 3½.

Prerequisite: Zool. 201 or equivalent.

Dissection of types of vertebrates and comparison with existing and extinct forms.

401 General Biology. Class 2 hours, laboratory 4 hours. Credit 31/3. Required: General science.

Elective: Education.

This course will be a study of the general problems of variation, inheritance and evolution.

402 Embryology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Zool. 201 or equivalent.

Required: Veterinary and general science.

Elective: Education.

A study of the development of the vertebrates, using the chick and pig as types.

## Physiology

201 Advanced Physiology. Class 3 hours, laboratory 2 hours. Credit  $3\frac{2}{3}$ .

Prerequisite: Secondary School Physiology and Freshman year Chemistry.

Particular attention is given to the physiology of nutrition and to hygiene.

## Bacteriology

310 General Bacteriology. Class 2 hours, laboratory 4 hours. Credit 3½.

This course covers the general principles of the science and enables the student to understand the importance of bacteria as related to disease, their economy in nature and their relation to the various industries, such as dairying, soil fertility, fermentation, etc.

Prerequisite to all other courses in bacteriology, except Bact. 303 and 402.

303 Household Bacteriology. Class 2 hours, laboratory 4 hours. Credit 31/3.

This course is given only to the students of home economics, and as far as possible is made to apply to the work in which these students are most interested.

Text: Household Bacteriology, Buchanan.

311 Dairy Bacteriology. Class 2 hours, laboratory 4 hours. Credit 3½.

A study of the bacteriology of milk and of milk products. Special attention will be given to sanitation and animal diseases as they may affect milk supply.

402 Sanitary Science. Class 3 hours. Credit 3.

This course is given especially to students in civil engineering. The course deals largely with water supply, sewage disposal and the different methods of treating sewage. Time is taken at the beginning of the course to familiarize the student with the general nature and relationship of bacteria to disease.

Text: Bergey on Sanitation, and Winslow on Sewage Disposal.

403 Technical Bacteriology. Class 3 hours, laboratory 4 hours. Credit 41/3.

This course is a continuation of 310 and deals more particularly with the relation of bacteria to disease processes. Work is offered in the production of vaccines, laboratory diagnosis, etc.

Text: Bouldon, Citron and Simon.

404 Advanced Work in Immunity. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: Bact. 301 and 403.

This semester's work completes a year's work in technical bacteriology in which the student is given theoretical and practical training in work along sero-diagnostic and immunological lines. This course is intended to fit a student for taking up original problems in the subject in the capacity of an investigator or in the ever-broadening field of municipal work.

Text: Simon, Emery, Zinser.

405 Agricultural Bacteriology. Class 2 hours, laboratory 4 hours. Credit 31/3.

This course is offered for the benefit of science students and the students of agriculture who may desire to familiarize themselves to some extent with the importance of bacterial activities to certain phases of agricultural work. Some industrial application of bacteriology should be understood by students who have interested themselves in this science.

# DEPARTMENT OF CHEMISTRY

L. CHAS. RAIFORD, Professor
E. V. LYNN, Assistant Professor
WM. J. BECKER, Instructor
M. A. ANDREEN, Instructor
E. E. HARNDEN, Graduate Assistant
M. E. OLMSTEAD, Graduate Assistant
J. W. HINKEL, Stüdent Assistant
MARTHA THOMAS, Student Assistant

The courses of instruction offered by the Department of Chemistry have been arranged to meet—

- 1. The special requirements of students pursuing work in the several schools of the College.
- 2. The needs of those who wish to enter upon careers as teachers of chemistry in secondary schools.
- 3. The requirements of students who wish a knowledge of the methods of work and application of the science on account of its relationship to their major work in other subjects, as, for example, agriculture, home economics, dairying, etc.
- 4. The needs of those who wish, after graduation, to do work leading to the master's degree here, or to prepare themselves for positions as analytical chemists.

The department is located in the Chemistry Building, which consists of two stories, basement and attic. One of the large, bright rooms on the first floor is fitted up for lectures and recitations. There is a lecture table conveniently equipped and arranged for demonstration and observation. The supply of apparatus and chemicals is quite extensive, and the student's interest

in the subject is first aroused then encouraged and stimulated. The lecture room has a seating capacity of over one hundred. The remainder of the first floor is taken up with laboratories and balance rooms for quantitative work.

On the second floor there are three laboratories for introductory work. Each of these is equipped for a total of seventy-two workers, and will accommodate twenty-four students at a time; a central store room opens into all three. During the working period there is an instructor in each laboratory and an advanced student in the store room. This arrangement has proved very efficient for laboratory instruction. All desks are so equipped with bottles of reagents and with apparatus as to minimize the loss of time incident to a student leaving his desk for these articles; and even in the case of more expensive instruments, materials and models for advanced students, every effort is made to keep on hand a supply that will meet all reasonable demands and prevent the serious loss of time and enthusiasm on the part of the student.

In the attic there are the general store rooms for apparatus and chemicals. These communicate with the supply and special store rooms and laboratories below by means of an elevator.

The building is heated by steam and lighted by electricity. Gas for experimental purposes is supplied by a Tirrell equalizing gas machine, and each laboratory desk is provided with both gas and water.

In general it may be said that it is the policy of the department to maintain at all times those conditions which promote orderly and serious work, and which cultivate a pleasurable interest in scientific experimentation.

#### SUBJECTS

101 Elementary General Chemistry. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: Ele. Phys.

Required of all Freshmen, and prerequisite for all other courses in the department.

An elementary study of the general principles of the science as exemplified in the preparation, examination of the properties, and consideration of the uses of the more important non-metals and their simple compounds. The derivation of formulas, the construction of equations, and the calculations based on them, are especially emphasized. Lectures, written exercises and individual laboratory work.

102 General Inorganic Chemistry. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Chem. 101 or its equivalent.

Required of all Freshmen.

A continuation of the work in Course 101, dealing with the metals and their compounds.

201 Qualitative Analysis. Class 2 hours, laboratory 6 hours. Credit 4. Prerequisite: Chem. 102.

Required of Sophomores in the courses in general and exact science in the School of Science and Literature.

A detailed consideration of such principles of general chemistry as solution, ionization, chemical equilibrium, precipitation, etc., with their application to the separation and recognition of the more important positive and negative ions, both in pure substances and in mixtures. Lectures, written exercises, quizzes, and laboratory work.

205 Elementary Organic Chemistry. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Chem. 102.

Required of Sophomores in the Schools of Agriculture and Home Economics.

An introductory course dealing with the sources, methods of preparation, properties, and classification of the chief groups of organic compounds of the alipathic series; their uses and their relationships to the fats and carbohydrates. Lectures, written exercises and laboratory work.

206 Quantitative Agricultural Chemistry. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Chem. 201, 205.

Required of Sophomores in the School of Agriculture.

An elementary study of the simpler quantitative methods, involving the care and use of the analytical balance, exercises in the gravimetric and volumetric analysis of pure substances of known composition, the preparation and standardization of volumetric solutions, constant practice with equations representing the reactions employed, and with the calculations based on them. The composition of the atmosphere and its relation to plant growth, the analysis of soils, fertilizers and plant products. Lectures, reports, written exercises and laboratory work.

207 Qualitative Analysis. Class 1 hours, laboratory 3 hours. Credit 2. Prerequisite: Chem. 102.

Required of Sophomores in the Schools of Agriculture and Home Economics.

A briefer course dealing with the same subject matter and employing the methods indicated under 201.

208 Elementary Food Chemistry. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Chem. 205, 207.

Required of Sophomores in the School of Home Economics.

A course dealing with the quantitative methods employed in the study of the materials immediately related to daily life. Air, water and

the more common food materials are made the subject of numerous experiments to illustrate their composition and properties. The estimation of chemical compounds in food products is especially emphasized.

210 General Quantitative Analysis. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Chem. 201.

Required of Sophomores in the courses in general and exact science in the School of Science and Literature.

A general study of the fundamental analytical methods, both gravimetric and volumetric, but without reference to any specific industry. Methods as in 206.

304 Advanced Quantitative Analysis. Class 2 hours, laboratory 6 hours. Credit 4.

Prerequisite: Quantitative Analysis and organic chemistry.

Required of Juniors in the courses in general and exact science in the School of Science and Literature. Offered to others prepared to take the work.

A selected series of determinations designed to familiarize the student with accuracy in analytical work, and to furnish him with suitable methods for a variety of fundamental operations required in any advanced work in chemistry.

305 General Organic Chemistry. Class 3 hours, laboratory 7 hours. Credit 51/3.

Prerequisite: Chem. 201 or its equivalent. Quantitative work is desirable, though not absolutely essential.

Required of Juniors in the courses in general and exact science in the School of Science and Literature.

A systematic study of the general principles of organic chemistry as illustrated by the discussion and preparation of the more important class types of both the aliphatic and aromatic series of compounds. Special attention is drawn to those compounds that have commercial importance as well as purely scientific interest, thus enabling the student to see the relationship between this science and other fields of knowledge.

310 Food Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Organic chemistry and quantitative analysis.

Elective for Juniors and Seniors in the School of Science and Literature, and offered to all who are prepared to take the work.

The qualitative and quantitative analysis of food materials; the detection and estimation of impurities, adulterations, coloring matter, etc., in accordance with the methods employed in the State and Federal Government service.

311-312 Advanced Organic Chemistry. Class 3 hours, laboratory 4 hours. Credit 41/3.

Prerequisite: Organic chemistry and quantitative analysis.

Elective for Juniors and Seniors in the School of Science and Literature, and offered to all who are prepared to take the work.

A course arranged for those who desire a more extended knowledge of organic chemistry than is provided in the courses described above. The classwork involves the discussion of the chemical beha-

vior and the characteristic reactions of the different classes of organic compounds, the synthetic methods by which they can be prepared, and the methods by which one class can be converted into another. The laboratory work will include the preparation and analysis of selected compounds.

313-314 Physiological Chemistry. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: General and organic chemistry. Analytical expe-

rience is highly desirable.

Elective for Juniors and Seniors in the Schools of Science and Literature and of Home Economics, and offered to all students pre-

pared to take the work.

A study of the synthetic and analytical reactions that accompany the physiological changes in animals and plants. The chemical properties of food and body substances and their general and specific characteristics; the behavior of enzymes and their functions; the changes that take place in digestion, assimilation and elimination are among the topics considered.

321 Geology. Class 2 hours. Credit 2.

Prerequisite: General chemistry.

Required of Sophomores in the course in general literature and Seniors in the course in exact science in the School of Science and Literature, and of Juniors in the Department of Civil Engineering.

An introductory course including an elementary study of constructive and destructive forces, the origin of the soil, the materials of the earth's crust and the manner of their occurrence, the chemical and mechanical changes brought about by geological agencies, and the surface features to which they give rise.

322 Determinative Mineralogy and Blowpipe Analysis. Class 1 hour, laboratory 4 hours. Credit 21/3.

Prerequisite: Chem. 207.

Required of Juniors in the Department of Civil Engineering.

A study of the physical properties of typical mineral species, and of the dry reactions of the elements, with their application to the identification of unknown minerals.

401 Advanced Inorganic Chemistry. Class 3 hours, laboratory 6 hours. Credit 5.

Prerequisite: General chemistry and two semesters of analytical work.

Required of Seniors in the course in exact science in the School of Science and Literature, and elective for others prepared to take the work.

A critical review of the reactions and theories studied in the elementary courses. Laboratory practice in the preparation of pure compounds from crude materials.

**402** Physical Chemistry. Class 2 hours, laboratory 6 hours. Credit 4. Prerequisite: Organic chemistry and quantitative analysis.

Required of Seniors in the course in exact science, and offered to

all students prepared to take the work.

A discussion of the laws of gases, the kinetic theory, the phase rule, optical activity, and related topics; with laboratory practice in the determination of vapor densities, molecular weights by the freezing and boiling point methods, calculation of the degree of ionization, estimation of optical activity.

404 Special Methods in Quantitative Analysis. Class 1 hour, laboratory 4 hours. Credit 2½.

Prerequisite: Organic chemistry and quantitative analysis.

Elective for Juniors and Seniors in the School of Science and Literature, and offered to all students prepared to take the work.

The technical methods employed in the analysis of such raw materials and industrial products as water, gas, iron and steel, special minerals, fuels, oils, etc.

420 Teaching of Chemistry. Class 1 hour. Credit 1.

Required of Seniors in the course in exact science in the School of Science and Literature, and elective for all others who have a sufficient knowledge of the subject matter under discussion.

A series of conferences in which the methods and procedure in teaching general chemistry will be discussed in detail. Selections of subject matter for classwork and laboratory exercises, apparatus and equipment for class demonstrations, relation of class and laboratory work, choice of text and reference books, etc.

**421-422 Master's Thesis.** Conference 1 hour, laboratory 10 or 20 hours a week. Credit in accordance with the amount of work done.

The work here indicated is of the nature of investigation, and is chiefly experimental, with the necessary reading and conferences. It is intended to familiarize the student with the methods used in independent work, and with an appreciation of the aims and objects of work in chemistry.

# DEPARTMENT OF ENTOMOLOGY

C. E. SANBORN, Professor H. R. PAINTER, Instructor W. E. JACKSON, Assistant

The courses of instruction given by the Department of Entomology are arranged to meet—

- 1. The requirements of Agricultural students who desire to have practical information relative to the control of injurious insects of the farm, orchard, and garden.
- 2. Requirements of students who desire to obtain a broader scope of entomology than above mentioned, for the purpose of demonstration work.
- 3. Requirements of students who are preparing to teach entomology in public schools.
- 4. Requirements of those who desire to specialize in entomology for the purpose of preparing themselves as nursery and orchard inspectors or for positions in other colleges and universities.

Work can be taken in this department leading to a master's degree.

The Experiment Station side of entomology is a closely allied division, and much of the practical side of the work taken by students can be gained through frequent assistance by the Experiment Station work of the department.

In addition to the regular well equipped class laboratory, there is a Station laboratory located in the Apiary Building to which students have frequent access for the purpose of becoming familiar in a most practical way with all lines of work in entomology.

#### **SUBJECTS**

202 General Entomology. Class 3 hours, field and laboratory 2 hours. Credit 3%.

A systematic study of insects and a study of their distribution, habits and methods of development with a view of ascertaining methods of control.

Text: Sanderson.

204 Sanitary Entomology. Class 2 hours, field and laboratory 3 hours. Credit 3.

A brief, systematic study of insects and a study of their life histories, and the habits of forms which disseminate disease and infest the household.

Text: Herrick.

303 Horticultural Entomology. Class 2 hours, field and laboratory 4 hours. Credit 31/3.

Habits and distribution of orchard and garden insects, studied in such a way as to portray the most practical methods of controlling them.

Texts: By assignment.

306 Apiculture. Class 3 hours, field and laboratory 2 hours. Credit  $3\frac{2}{3}$ .

A general course in beekeeping.

Text: Root.

403 Advanced Entomology. Class, field and laboratory work by assignment.

Subjects given by assignment. (Practically all courses in advanced entomology will be given by assignment. This refers particularly to graduate students.)

## DEPARTMENT OF ENGLISH

N. W. Rockey, Professor Albert H. Nelson, Instructor M. A. Sweney, Instructor Fearn Hamilton, Assistant

A number of improvements have been made recently which enable the Agricultural and Mechanical College to keep pace with the constantly increasing attention that is being paid to English in other institutions. New courses have been added to meet the special needs of students, and a very wide selection of courses is now made possible. Constant additions of books for reference and supplementary reading are provided by the library.

The aim of the department is two-fold: (1) To create such a love in the student for the best literature that he shall continue to read and enjoy it after his school days are over; (2) to teach the student to express himself clearly and forcibly in writing and speaking.

## **SUBJECTS**

## 101, 102 College. Class 3 hours. Credit 3.

Prerequisite: Preparatory English.

This course consists principally of the study and practice of the principles of composition. A thorough knowledge of the principles of grammar is essential. Frequent themes of various nature are required and a study of classics is introduced. Emphasis is placed upon oral composition and individual conference and correction. Students are required to attain a high standard of self-expression. All students must have access to an unabridged dictionary and are urged to possess a good, standard dictionary.

## 201 Advanced Composition. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

An advanced course in argumentative and expository types of writing supplemented by a study of examples taken from literature.

## 202 Advanced Composition. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

An advanced course in descriptive and narrative types of writing, supplemented by a study of examples taken from literature.

## 203 News Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

A study of the elements of news writing and style form the basis of the work. Proper attention is given to writing leads, structure of news stories, reporting and gathering of news, interviewing, reporting speeches, and other forms of elementary journalism.

## 204 Magazine and Editorial Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102, 203.

This course takes up the problem of turning scientific and technical information into practical articles for publication in magazines. Practical work in editing and proofreading.

## 205, 206 Current Literature. Class 1 hour. Credit 1.

Prerequisite: 101, 102.

A course offered as an aid to more intelligent magazine reading and to stimulate an interest in the best current literature.

Text: Current magazines and books.

207, 208 English Literature. Class 3 hours. Credit 3.

Prerequisite: 101, 102.

A general survey. First semester work extends to the early Romantic Movement; second semester work, from Wordsworth to Stevenson. The principal study is of the literature itself, but enough attention is given to the life of the author and the times in which he lived to enable the student to appreciate his work and influence. It is an introduction to literature and literary criticism, and, although it is elective to advanced students, those electing it early in their course will be enabled to pursue the more advanced courses with greater profit and success.

Text: Twelve Centuries of English Poetry and Prose, New-comer and Andrews.

209 Technical Writing. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

This is an advanced course in composition adapted to the interests and needs of engineering students.

301, 302 Feature and Publicity Writing. Class 2 hours. Credit 2.

Prerequisite: 203, 204.

An advanced course in writing for actual publication. Publicity work is undertaken in connection with the course. Membership is limited and subject to the approval of the instructor.

\*303, 304 American Literature. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

This course covers a history of American literature in a more intensive manner than is possible in secondary schools. Attention will be given to literary periods and to the writing of the lesser as well as the greater American authors. Some comparison is made with English literature. Prose occupies one semester, poetry the other.

\*305, 306 English Language. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

A college course in the structure of language, and aimed to advance and deepen the student's knowledge of grammar. Some attention is given to the historical development of forms and to word study.

307, 308 Bible Literature. Class 2 hours. Credit 2.

Prerequisite: 101, 102.

A literary study of the Bible.

401 Carlyle and Ruskin. Class 3 hours. Credit 3.

Prerequisite: Eng. 101, 102.

The assignment in this work varies from year to year. This year the following will be studied: "Carlyle's "Sartor Resartus"; prose writings of other essayists, including Ruskin. Although not a prerequisite, students should have had Eng. 207 and 208.

Text: For Carlyle, the Athenaeum edition.

402 Victorian Poets. Class 3 hours. Credit 3.

Prerequisite: Eng. 101, 102.

This course is designed to give students a comparatively thorough knowledge of one of the master poets of the Nineteenth Century.

This does not exclude the consideration of other authors as an aid to the study of the author chosen. This year Browning has been selected for intensive study. Although not a prerequisite, students should have had Fing. 207, 208.

403 Romantic Movement in English Poetry. Class 3 hours. Credit 3. Prerequisite: Eng. 101, 102.

About one-fourth of the time is devoted to Wordsworth, the remainder to Coleridge, Byron, Shelley and Keats. This course is supplemented by lectures and collateral readings, tracing the rise and development of the Romantic Movement. The work is based upon the complete work of each of the authors studied. By clubbing together the students have purchased the five volumes at a reasonable rate. Although not a prerequisite, students should have had Eng. 207, 208.

## 404 Shakespeare and the Drama. Class 3 hours. Credit 3.

Prerequisite: Eng. 101, 102.

A study is made of the rise and development of the English drama, of the Elizabethan stage, and the conditions under which the great dramatist wrote. Specimens of early English plays and Shakespeare's plays are reported upon, and some attention is given to the later drama.

#### \*405, 406 The Novel. Class 2 hours. Credit 2.

Prerequisite: Eng. 101, 102.

In this course the development of the English novel into definiteness of form and purpose receives due emphasis, and the writers studied are treated as representatives of the life, the thought and literary movements of the times in which they lived.

## \*407, 408 Masterpieces. Class 2 hours. Credit 2.

Prerequisite: Eng. 101, 102.

An intensive study of masterpieces to be selected by the instructor.

\*Only one of the following courses is offered in each year: Courses 303-304, 305-306, 405-406. Courses 303-304 and 305-306 are offered in alternate years. Courses 405-406 and 407-408 are offered in alternate years.

#### DEPARTMENT OF MATHEMATICS

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CARL GUNDERSON, Professor R. E HARTSOCK, Associate Professor Z. N. Holler, Assistant Professor John H. Andrews, Assistant Professor

Work in college mathematics is required of all students in the School of Engineering and in the divisions of general and exact science of the School of Science and Literature.

Courses 105, 108, 207, 208 are required of engineers, 205 of civil engineers, 105, 108 and 204 in general science, 105, 108, 204, 207, 208, 301 and 302 in exact science.

The other courses are elective.

## SUBJECTS

105 College Algebra. Class 4 hours. Credit 4.

Prerequisite: High School Algebra and Plane Geometry.

Variables and functions; binomial theorem; progressions; complex numbers; logarithms; limits; permutations and combinations.

Text: Reitz and Grathorne.

108 Plane Trigonometry. Class 3 hours. Credit 3.

Prerequisite: Plane Geom. and Math. 105.

The development and use of trigonometric functions; relations between the functions; logarithms; solution of triangles; application to practical problems throughout the course.

Text: Ashton and Marsh.

207 Analytical Geometry and Calculus. Class 5 hours. Credit 5.

Prerequisite: Math, 108 and Solid Geom.

Cartesian and polar coordinates; equations and properties of straight lines and curves; introduction to analytical geometry of three dimensions; introduction to calculus; limits; infinitesimals; rates; maxima and minima; partial differentiation,

Text: Brief Course in Analytic Geometry, Tanner and Allen; Infinitesimal Calculus, Murray.

208 Calculus. Class 5 hours. Credit 5.

Prerequisite: Math. 207.

Change of variable; integration; application of integration; multiple integrals; curvature; properties of curves; infinite series; Taylor's theorem, hyperbolic functions, indeterminite forms.

Text: Infinitesimal Calculus, Murray.

204 Astronomy. Class 2 hours. Credit 2.

Prerequisite: High School Algebra and Geometry.

The celestial sphere; reference lines and astronomical measurements; the solar system; laws of motion; evolution; stars; comets; nebulae; structure of the universe.

Text: Elements of Astronomy, Young.

205 Spherical Trigonometry. Class 1 hour. Credit 1.

Prerequisite: Solid Geom. and Math. 108.

Right and quadrantal triangles; oblique triangles.

Text: Ashton and Marsh.

301 Differential Equations. Class 3 hours. Credit 3.

Prerequisite: Math. 208.

Solution of differential equations involving two variables.

Text: Murray.

302 Differential Equations. Class 3 hours. Credit 3.

Prerequisite: Math. 301.

Continuation of Math. 301; ordinary differential equations with more than two variables; partial differential equations.

Text: Murray.

#### DEPARTMENT OF FOREIGN LANGUAGES

GUSTAV F. BROEMEL, Professor ALMON AI ARNOLD, Instructor CORAL DUKE NATHAN, Assistant

The Secondary School of Oklahoma A. and M. College requires one year of some foreign language of all students except those who are preparing for the Schools of Commerce and Marketing or Agriculture, who may elect German. Students who are preparing for the School of Engineering must take two years of a foreign language.

The College offers a three years course in Spanish, French or Latin, and a four years course in German.

As to which courses are required, and which elective, see the courses of study outlined for each school.

The student is allowed to take that course for which he is prepared.

#### **SUBJECTS**

#### German

101 Beginners' Course. Class 3 hours. Credit 3.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Written and oral translations from English to German. Conversation.

Text: A Brief Course in German, Whitney.

102 Beginners' Course. Class 3 hours. Credit 3.

Prerequisite: Ger. 101. Continuation of Course 101.

Text: Same as 101.

201 Advanced Reading Course. Class 3 hours. Credit 3.

Prerequisite. One year of German.

Syntax is reviewed and studied more intensively. One hour a week will be given to composition. Reading of about two hundred pages of prose.

Text: German Composition, Philip S. Allen; Storm's Immensee; Zschokke's Der Zerbrachene Grug.

202 Advanced Reading Course. Class 3 hours. Credit 3.

Prerequisite: Ger. 201.

One hour a week composition. Reading of about two hundred pages of prose.

Text: German Composition, Philip S. Allen; Meyer-Forster's Karl Heinrich.

301 Masterpieces in German Drama and Novel. Class 3 hours. Credit 3.

Prerequisite: Ger. 202.

Reading occupies most of the time. Composition is continued. Collateral readings.

Text: German Composition, Harris; Felix Dalm's Ein Kampf um Rom; Goethe's Hermann und Dorothea. Texts vary.

302 Masterpieces in German Drama and Novel. Class 3 hours. Credit 3.

Prerequisite: Ger. 301.
Continuation of Course 301.

Text: Gustav Freytag, Soll und Haben; Scheffel, Der Trompeter von Saekkingen. Collateral readings. Texts vary.

303 Scientific German. Class 3 hours. Credit 3.

Prerequisite: Ger. 202.

Reading of technical and scientific German.

304 Scientific German. Class 3 hours. Credit 3.

Prerequisite: Ger. 303. Continuation of Course 303.

Text: Technical and Scientific German, Greenfield.

401 Schiller. Class 3 hours. Credit 3.

Prerequisite: Ger. 302.

Intensive study from the literary and cultural side of a number of carefully chosen dramas. Essays in German based on the texts. Collateral readings. Course is conducted in German.

Text: Jungfrau von Orleans und Marie Stuart, or Brant von

Messina und Wallenstein.

402 Goethe. Class 3 hours. Credit 3.

Prerequisite: Ger. 401.

Lectures on Goethe's life and works; study of Goethe's prose, poetry and drama; essays written in German. Collateral readings. Course is conducted in German.

Text: Faust (Part I), and Egmont.

403 Advanced Scientific German. Class 2 hours. Credit 2.

Prerequisite: Ger. 303.

Reading of technical and scientific magazines.

404 Advanced Scientific German. Class 2 hours. Credit 2.

Prerequisite: Ger. 403.

Reading of technical and scientific magazines.

501 Advanced Composition and Conversation. Class 3 hours. Credit 3. Prerequisite: Ger. 302.

This course is intended for students who are planning to become teachers of German.

Text: German Conversation, Allen.

502 Advanced Composition and Conversation. Class 3 hours. Credit 3.

Prerequisite: Ger. 501. Continuation of Course 501.

Text: Aus dem Deutchen Dichterwald.

#### French

101 Elementary Course. Class 3 hours. Credit 3.

Essentials of French Grammar; the more common irregular verbs. Careful training in pronunciation.
Text: Fraser and Squair's Shorter Course.

102 Elementary Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 101.

Continuation of Course 101.

Reading of about three hundred pages of modern prose. Emphasis on irregular verbs, idioms and translation of easy French at sight.

Text: Fraser and Squair's Shorter Course; Francois and Giraud's Simple French; Labiche's Le Voyage de Monsieur Perichon.

201 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 102.

Advanced prose composition, reading of standard authors.

Text: François' Advanced Prose Composition; Merimee's Colomba; Beaumarchais' La Barbier de Seville, Collateral readings.

202 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 201.

Continuation of Course 201.

Text: Francois' Advanced French Composition; Victor Hugo's Les Miserables; Loti's Pecheur d' Islande.

203 Scientific French. Class 2 hours. Credit 2.

Prerequisite: Fr. 102.

Text: Bowen's Elementary Scientific Reader.

204 Scientific French. Class 2 hours. Credit 2.

Continuation of Course 203.

Text: French scientific magazines.

301 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 202.

A careful study of the tragedies of Racine and Corneille. Collateral readings.

Text: Corneille's Le Cid, Horage, etc.

302 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Fr. 301.

A study of the drama of the Eighteenth Century. Collateral readings.

Text: Mariyaux's Comedies: Voltaire's Zaire.

## Spanish

101 Eelementary Course. Class 3 hours. Credit 3.

Mastery of the forms of grammar; careful treatment of the pronunciation, emphasis on the most important irregular verbs.

Text: A Brief Spanish Grammar, Ingraham-Edgren.

102 Elementary Course. Class 3 hours. Credit 3.

Prerequisite: Course 101.

Emphasis on irregular verbs and most common idioms. Reading of about three hundred pages of modern prose.

Text: Hill's Spanish Tales.

201 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 102.

Advanced prose composition; reading of standard authors.

Text: Humphrey's Spanish Prose Composition; Johnson's Cuentos Modernos; Hartzenbush's La Coja y El Encogido.

202 Intermediate Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 201.

Continuation of Course 201.

Text: Harrison's Spanish Commercial Reader; Harrison's Spanish Correspondence; Spanish magazines and reviews.

301 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 202.

Letter writing and conversation.

Texts vary.

302 Advanced Course. Class 3 hours. Credit 3.

Prerequisite: Sp. 301. Continuation of Course 301.

Texts vary.

#### Latin

101 Caesar. Class 3 hours. Credit 3.

Prerequisite: One year of Latin.

Three books of the Gallic War are read. Methods of translation are carefully taught until the student reaches the point where diligence alone will give mastery. Constant drills in forms, syntax and pronunciation.

Text: Any text in Caesar.

102 Caesar. Class 3 hours. Credit 3.

Prerequisite: Latin 101.

Two more books of the Gallic War are read. Drill in sight-reading. One hour a week is devoted to prose composition.

Text: Daniels' Composition.

201 Cicero's Letters and Orations. Class 3 hours. Credit 3.

Prerequisite: Latin 102.

A reading course with special attention to the life and personality of Cicero.

202 Cicero's Essays. Class 3 hours. Credit 3.

Prerequisite: Latin 201.

A study of the life, personality and philosophy of Cicero. Study of Cicero's style and prose composition.

Text: Cicero's De Senectute. De amicitia.

301 Virgil. Class 3 hours. Credit 3.

Prerequisite: Latin 202.

The first three books of the Aeneid; lectures on the meter.

302 Roman Historians to Tacitus. Class 3 hours. Credit 3.

Prerequisite: Latin 301.

A reading course of selections from Nepos, Sallust, Livy and Tacitus.

401 Horace's Odes and Epodes. Class 3 hours. Credit 3.

Prerequisite: Latin 202.

Memorizing of at least six odes. Discussion of Roman lyric poetry.

402 Teachers' Course. Class 3 hours. Credit 3.

Prerequisite: Latin 202.

Lectures on bibliography and on methods of teaching elementary Latin. Discussions of standard elementary texts.

#### DEPARTMENT OF DRAWING AND ART

ANNIE SMITH, Professor MABLE HUEY, Instructor RUTH LAWSON, Assistant

Fine arts are the realm of originality even though the function of imitation and scientific thinking in them is recognizable. In general the aim of art training should be to develop in the mind of the student power to see relations and to represent them truthfully; to develop facility in expression; to establish standards of excellence of form, color and design, and to enable him to construct in accordance with standards.

Art courses herein offered have been planned to articulate with social interests; to correlate with coordinate studies, and to anticipate the development of the aesthetic influence that art bears to life.

Completed projects in art work that meet a certain standard of excellence shall be placed by students at the disposal of the institution for a period of one year.

Full equipment of art supplies must be purchased at beginning of each semester.

## **SUBJECTS**

#### 101 Practice 4 hours. Credit 11/3.

Freehand drawing, in accordance with fundamental principles of perspective and laws governing correct drawing, composition and color harmonies. Work includes the representation from observation of such forms as object and nature motifs, and involve the use of pencil and charcoal.

#### 102 Practice 4 hours. Credit 11/3.

Freehand drawing from object and nature motifs continued, introducing use of crayons, water colors and charcoal.

## 104 Practice 4 hours. Credit 11/3.

Prerequisite: Draw. 101.

Theory and practice of design principles in the expression of form and color ideas, including various kinds of construction arrangement and decoration.

#### 203 Practice 4 hours. Credit 11/3.

Drawing from cast and draped figure, giving expression in line and tone modeling by use of charcoal and crayon, and water color.

#### 204 Practice 4 hours. Credit 11/3.

Drawing and painting from life, nature forms and objects, giving line and tone modeling by use of such mediums as charcoal, water colors and oils.

## 206 Practice 4 hours. Credit 11/3.

Prerequisite: Freshman Design, second semester.

Development of design problems for direct application, pertinent to use of stencil, wood stamp, opaque color, enamelac and stitchery in applique and embroidery.

## 207 Art Lectures. Class 1 hour. Credit 1/3.

## 307 Practice 4 hours. Credit 11/3.

Prerequisite: Sophomore Art.

Portrait and figure drawing from costumed models. Mediums employed are pencil, crayon, charcoal.

## 308 Practice 4 hours. Credit 11/3.

Portrait and figure drawing and painting. Drawing of models in composition with related interests. Art mediums, charcoal, pencil, pen and ink, and water color.

## 309 Commercial Art. Practice 4 hours. Credit 11/3.

Poster illustration and commercial design, embodying drawing in black and white and in color, in line and tone modeling; freehand lettering and its application to commercial problems. Pen and ink rendering and use of show-card color mediums are involved in development of design motifs; object, nature and life.

## 401 Practice 4 hours. Credit 11/3.

Advanced work in water color painting from object, flower and landscape motifs, giving practice in different phases of art representation; realistic, pictorial and decorative.

403 Practice 6 hours. Credit 2.

Advanced work in oil painting in representation of life, nature and object.

404 Handicrafts. Practice 4 hours. Credit 11/3.

Prerequisite: First-year Design.

The embodiment of structural design, including projects in textile weaving, basketmaking, leather construction, bookmaking and bookbinding.

406 Modeling. Practice 4 hours. Credit 11/3.

Prerequisite: First-year Design.

Clay modeling and pottery, including the study of form and construction with clay as the medium of expression. Pottery comprises the making and decorating of tiles and shaped models, such as bowls and vases.

408 Lecture Course. Class 1 hour.

Relating knowledge and appreciation of art to life. Reading based on the Psychology of Beauty by Ethel Puffer; The Philosophy of Art by Edward Howard Griggs, and writings by Ruskin, Emerson, etc.

405 Practice 4 hours.

Prerequisite: First-year Design, and first-year Art, or equivalent work.

Porcelain design and decorating of china, relating fundamental principles of design and color with technique of china decoration.

#### DEPARTMENT OF HISTORY

S. A. MARONEY, Professor

The study of history has two distinct but not incompatible aims. One of these is personal culture, the other is practical vocational value. Each of these standards is sought in both method and matter in different proportions to suit the various courses of the Agricultural and Mechanical College. The number of classes offered is limited by the technological character of the curricula. The newer conceptions of history prevail which treat the subject more for thought than for memory of facts, minimize the details of wars, and stress ethical, political and industrial features. Special adaptations are made to reinforce the College work in agriculture and home economics. The College library contains many valuable sets of reference works, which are being added to from time to time.

The department has charge of the history in the Secondary School. For courses in Hist. 21, 22, 31, 32 and 41 see Secondary School.

## SUBJECTS

201, 202 History of the United States. Each 3 hours class, Credit 3.

Prerequisite: Am. Hist. 31 and 32 (Government) in Secondary School, or equivalent.

Required in general literature course of School of Science and

Literature.

Elective in School of Education, et al.

201 to Presidency of Andrew Jackson. Colonial period as preparatory to nationality. Steps toward union the dominant theme in the Revolution, critical period, and adoption and operation of the Constitution. Social, industrial and educational features given due but

secondary consideration.

202 Continuation of 201 to date. Political history basic. Financial and social phases not slighted. Enlargement of governmental activities, state and national, emphasized as characteristics of recent years. Aims to give insight into present-day problems. Current history utilized to give reality to past and to keep pace with the present.

301, 302 History of England. Each, class 3 hours. Credit 3.

Required general literature course in School of Science and Literature.

Elective in School of Education, et al.

301 to the Stuarts. Rise of English national form. Anglo-Saxon institutions, advancement in democracy as roots of modern institu-

302 British colonial, naval and commercial growth. Recent British social legislation. Church. Background of English literature. The War of Nations.

Students majoring in English may take 301-302 in Sophomore

year and 201-202 in Junior year.

401, 402 Modern Europe. Each, class 3 hours. Credit 3.

Prerequisite: Secondary School science and modern history.

Should not be taken before 201, 202, 301, 302. Department may grant exception in part.

Required, general literature.

Elective: School of Education, et al.

401 from 1500 to 1815. Sketch some earlier large events. The rise of the nations, the papacy, feudalism, rennaissance and reforma-

tion, French Revolution.

402 continuation of 401 from 1815 to present. Political and social development. Traces complex conditions leading to War of Nations.

Deals with large questions of nationalism, democracy and internationalism.

204 Industrial History of the United States. Class 3 hours. Credit 3. Required, Sophomore Home Economics.

Elective, School of Education, et al.

Economic side of national growth emphasized rather than political. History of different industries, periods and movements, leading to survey of conditions of today.

Adaptations to Home Economics.

306 Industrial History of the United States. Class 2 hours. Credit 2. Content and text same as in 204.

Required in Junior exact science and general science.

#### DEPARTMENT OF PHYSICS

J. GARRETT KEMP, Professor E. W. SCHUHMANN, Instructor

Physics is the basic science which includes the fundamental laws and principles involved in all physical changes. The courses which follow give both a theoretical and practical treatment of the subject. Instruction is based on the material contained in carefully selected textbooks. This is supplemented by lectures illustrated by demonstrations and by lantern slides. The purpose is to give a training in exact reasoning, and a knowledge of principles that will aid in the solution of both scientific problems and those encountered in everyday life.

The laboratory work gives the student an opportunity to test the principal laws of the science. Special attention has been given to equipping the laboratory with modern apparatus which will give consistent experimental results. This work is carefully coordinated with the work of the classroom, and should enable the student to acquire skill in the manipulation and care of delicate apparatus.

The lecture room is provided with terraced seats which permit the students to see the demonstrations performed on the lecture table. It is equipped with a combination lantern slide and opaque projectoscope which is used in illustrated lectures. The laboratory is well arranged for work, and the equipment provided is of such a nature that it meets the requirements of the different courses.

## SUBJECTS

103 Physics—Mechanics, Heat and Sound. Class 2 hours, laboratory 4 hours. Credit 3½.

Required of all students in home economics of the Freshman class.

Text: Kimball's College Physics.

105 General Physics—Mechanics, Heat and Sound. Class 3 hours, laboratory 2 hours. Credit 3%. (Non-mathematical.)

This course consists of two demonstration lectures in which lantern slides and projections are used, one recitation, and one laboratory exercise per week. This course and the following, Phy. 106, is suitable for students in the Schools of Agriculture, Commerce and Marketing, Education, and those who wish to study the subject for its practical training in the scientific method (the basis of all efficiency developments), and for aesthetic purposes

Text: Kimball's College Physics, Revised Edition.

106 General Physics—Magnetism, Electricity and Light. Class 3 hours, laboratory 2 hours. Credit 3%.

Prerequisite: Phy. 105, or the equivalent. This course is the continuation of Phy. 105.

Text: Kimball's College Physics, Revised Edition.

201 Engineering Physics—Mechanics, Heat and Sound. Class 4 hours, laboratory 3 hours. Credit 5.

Prerequisite: College Algebra and Trigonometry.

Required of all students in the School of Engineering of the Sophomore class.

Text: Duff's.

202 Engineering Physics—Magnetism, Electricity and Light. Class 4 hours, laboratory 3 hours. Credit 5.

Prerequisite: Phy. 201, or the equivalent.

Required of all students in the School of Engineering of the Sophomore class.

This course is the continuation of Engineering Physics 201.

Text: Duff's.

203 General Physics—Mechanics, Heat and Sound. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: College Algebra and Trigonometry.

Required of all students in architecture and the School of Science and Literature of the Sophomore class.

Text: Kimball's College Physics, Revised Edition.

204 General Physics—Magnetism, Electricity and Light. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 203, or the equivalent.

This course is the continuation of General Physics 203, and required of all students in the School of Science and Literature of the Sophomore class.

Text: Kimball's College Physics, Revised Edition.

301 Electrical and Magnetic Measurements. Class 2 hours, laboratory 3 hours. Credit 3.

Prerequisite: Phy. 201 and 202, or Phy. 203 and 204, or the equivalent.

Required of all students of the Junior class in electrical engineering.

Text: Hadley's Magnetism and Electricity for Advanced Students.

Laboratory Manual: C. M. Smith's Electrical Measurements.

302 Electrical and Magnetic Measurements. Class 1 hour, laboratory 3 hours. Credit 2.

Prerequisite: Phy. 305.

This course is the continuation of 305, and it is required of all students of the Junior class in electrical engineering.

Text: C. M. Smith's Electrical Measurements.

303 Advanced Physics—Mechanics and Sound. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 203, or the equivalent.

Required of Junior class students in exact science.

Text: Edser's General Physics for Advanced Students.

304 Advanced Physics—Heat and Thermodynamics. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 203, or the equivalent.

Required of Junior class students in exact science.

Text: Edser's Heat for Advanced Students.

403 Advanced Physics—Magnetism, Electricity and Radio-Activity. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 201 and 202, or Phy. 203 and 204, or the equivalent.

Required of Seniors in exact science.

Text: Hadley's Magnetism and Electricity for Advanced Students.

Laboratory Manual: C. M. Smith's Electrical Measurements.

404 Advanced Physics—Light and Radiation. Class 3 hours, laboratory 3 hours. Credit 4.

Prerequisite: Phy. 201 and 202, or Phy. 203 and 204, or the equivalent.

Required of Seniors in exact science.

Text: Edser's Light for Advanced Students.

#### DEPARTMENT OF BOTANY

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CHAS. O. CHAMBERS, Professor C. D. LEARN, Assistant Professor

This department occupies rooms in Morrill Hall and is now fairly well equipped with new microscopes, reagents and other necessary paraphernalia. The loss occasioned by the fire of August 7, 1914, amounting to over \$15,000.00, has been partially restored by the expenditure of some \$1,500.00 in equipment during the present year, in addition to a similar amount spent the previous year. The nucleus of a new herbarium to replace the loss occasioned by the great fire is now under way.

## **SUBJECTS**

101 General Botany. Class 2 hours, laboratory 4 hours. Credit 31/3. Prerequisite: Bot. 22.

The principles of plant structure studied from the standpoint of function; an introduction to physiology, genetics and ecology.

Text: College Botany, Gager.

102 General Botany. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Bot. 101.

General morphology of the principal natural groups of plants from the standpoint of evolution from lower to higher forms, their structure, habits and relationships; an introduction to systematic botany.

Text: College Botany, Gager.

104 General Botany (for agricultural students). Class 3 hours, laboratory 4 hours. Credit 41/3.

The principles of plant structure, studied from the standpoint of plant function; an introduction to physiology, genetics and ecology; an introduction to systematic botany. As far as possible economic agricultural plants will be studied.

204 Plant Physiology. Class 2 hours, laboratory 2 hours. Credit 23/3. Prerequisite: Bot. 101, 102.

A study of the vital processes in high plants.

Text: Plant Physiology, Duggar.

206 Systematic Botany. Class 1 hour, laboratory 6 hours. Credit 3. Prerequisite: Bot, 101, 102.

A taxonomic study of flowering plants.

Text: Manual of Botany, Gray (Seventh Edition).

305 Pathology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Bot. 101, 102, 204.

A study of fungous diseases, both host and parasite.

Text: Fungous Diseases of Plants, Duggar.

303 Genetics. Class 3 hours. Credit 3.

Prerequisite: Bot. 101, 102.

A study of the principles of biometrics and their application to plant breeding and selection.

Text: Genetics, Castle.

401 Special Systematic Botany. Class 1 hour, laboratory 6 hours. Credit 3.

Prerequisite: Bot. 206.

A continuation of 206, with special emphasis on economic groups.

Text: Manual of Botany, Gray (Seventh Edition).

402 Morphology of Higher Plants. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: All preceding botany.

A histological study of the higher plants.

403 Cytology and Technique. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{2}$ 3.

Prerequisite: Bot. 101, 102, 204, 206.

A study of the cell and histological methods; fixing, staining of plant tissues and preparation of microscopic slides.

404 Economic Botany. Class 2 hours, laboratory 4 hours. Credit 31/3.

Prerequisite: Bot. 101, 102, 204, 206.

A microscopic study of various economic plants, their food products and adulterants; the reserve food of plants, its form and use; a systematic study of economic groups of plants and their place in cultivation.

Text: Economic Botany, Kraemer.

#### DEPARTMENT OF PUBLIC SPEAKING

J. R. PELSMA, Professor

This department aims to make each student an intelligent reader and an effective speaker. It aids him to systematize, to correlate, and to express his knowledge gained through study and experience; it encourages concentration, stimulates logical thinking, and gives opportunity for self-expression. It teaches control of thought and action, which is the acme of all education.

Public speaking students are required to attend and to report upon certain public speaking contests and other public addresses given during the semester, and are urged to join a literary society and to participate in some of the contests provided by the Oratorical Association.

The department has charge of the Amateur Dramatic Club. Its membership is open to students with histrionic ability. The club stages two plays each year.

## **SUBJECTS**

123 Essentials of Public Speaking. (Five sections each semester). Credit 1%.

This is an elementary course and a prerequisite to all other courses in public speaking. The fundamental principles of expression are emphasized through drills in correct breathing, tone production, voice modulations, and in the composition and the delivery of original speeches. A basis of self-criticism is effected enabling the student to continue improving his speeches after completing the course. The work will be adapted to the present and future needs of each student.

201 Argumentation and Debate. Class 2 hours. Credit 2.

A study of the principles of argumentation—Analysis, evidence, proof, refutation and fallacies. Brief drawing. Practical debating Platform technique. Critical study of masterpieces of forensic oratory. Parliamentary drill.

202 Oratory. Class 2 hours. Credit 2.

A study of the oration, the orator, and the audience. Analytical study of classic orations. Practice in the composition and the de-

livery of orations, formal speeches and occasional addresses. The psychology of the crowd in its relation to the public speaker. A brief history of oratory.

301 Extempore Speaking. Class 2 hours. Credit 2.

This course aims to cultivate in the student a fluent, forceful and effective presentation of his own thoughts to others. Daily practice will be given on assigned subjects previously mastered and outlined, though the diction of the speech is not memorized. Every student should learn to think while on his feet. This course affords an opportunity to become an effective platform speaker through a careful preparation and delivery of various forms of public address adapted to definite audiences.

302 Literary Interpretation. Class 2 hours. Credit 2.

An advanced course in reading. Classical literary selections will be studied with a view to their vocal interpretation. Studies in the dramatic monologue, humorous, pathetic and dramatic productions will be read. Physical expression. Dialect readings. Modern stage technique.

303 Oral English. Class 2 hours. Credit 2.

A course designed for teachers of English in secondary schools. Standard literary classics will be interpreted orally. Emphasis will be placed on college entrance requirements in English, Methods of teaching oral English in secondary schools. Vocal technique. Voice defects—diagnosis and treatment. Story-telling. Criteria for judging contests.

304 Seminar in Debating and Oratory. Class 2 hours. Credit 2.

An advanced course in debating and oratory. Designed for intercollegiate debaters, orators and their alternates.

## THE SCHOOL OF EDUCATION

JOHN H. BOWERS, Dean

The literary, scientific and industrial work required of the students in the School of Education is done in those departments of the College having special facilities and equipment for teaching these branches efficiently and with greatest economy to the prospective teacher. And the special method of teaching these subjects in high school is also given in special courses in their respective departments.

## B. S. Degree and State Life Certificate

Students who complete the full four years' course in the School of Education receive a Bachelor of Science degree and a State Life Certificate in Oklahoma. A state life certificate may also be secured on the same conditions as at the State Normal Schools; that is, six years work above the eighth grade, or two years work above the high school; and such work must include the several requirements for such certificate. Other teachers' certificates will be granted by the regular authorities for granting such certificates, State, county or city, to students who have done work at the A. and M. College on the same conditions as for work done at the State University or at the State Normal Schools.

#### Short Course for Teachers' Certificates

Those who desire to prepare for teaching and do not desire to take the full four years' course can attend the College one or more terms and elect such studies as are necessary to secure the particular certificate which they desire. When a subject is completed at the College the certificate-granting authorities of the State accept that credit instead of an examination. All subjects required for teachers' certificates are offered some time during the College year, and all such subjects are offered during the Summer School.

## Special Courses for Rural Teachers

The College offers excellent opportunities for those who are preparing to teach in the rural schools. The College instructors understand and appreciate the needs of country life and certain specialists in the College devote their best efforts to the problems of rural welfare.

## Requirements for Graduation

The candidate for graduation from the School of Education, in addition to the subjects required for a State permanent certificate, must select a major group of studies, such as Biology, Physical Sciences, Social Sciences, Economics, History, English, Foreign Languages, Agriculture, Home Economics. Preparation may also be made for teaching Manual Training, Music and Commercial subjects. One hour of practice teaching and one hour of theory of teaching the major subject will be required.

#### COURSES IN THE SCHOOL OF EDUCATION

The following outline of study represents the required and elective work in the School of Education. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject, and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits exclusive of any credits given in military science and physical education. Students will not be allowed to register in fewer than 12 nor more than 20 credit hours.

Sophomore electives are open to Juniors and Seniors where the necessary prerequisite work is taken. Both Junior and Senior electives are open to either Juniors or Seniors.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis hours of laboratory work.

#### FRESHMAN YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hrs	. Cr.		Irs. Cr.
Eng. 101, College	1) 41-3	Eng. 102, College 3 Chem. 102, Inorganic 2	(4) 3 1-3
Pub. Spk. 123, Essentials 1 (2 Draw. 101, Freehand	2) 1 2-3	Draw. 102, Freehand Edu. 102, Principles of	(4) 1 1-3
Edu. 101, Psychology 2	2	Education 2	2
Physical Education	3) 3)	Physical Education	(3)
H. E. 103, Survey 2	2	Electives (approx.)8	8
Electives (approx.) 5	5		

#### SUGGESTED FRESHMAN ELECTIVES

FIRST SE	MESTER		SECOND SEMESTER	
Bot. 101, General Foreign Landuage Math. 105, College Algebra Agriculture or Home Economics or Manual Training	3	Cr. 3 1-3 3	Bot. 102, General	Cr. 3 1-3 3

#### SOPHOMORE YEAR

FIRST SEMESTER		SECOND SEMESTER	
Hrs.	Cr.	Hrs.	Cr.
Eng. 201, Advanced		Eng. 202, Advanced	
Composition		Composition	
Eng. 203, News Writing 2	2	Eng. 204, Magazine and	
Phy. 203, General		Editorial Writing 2	2
or		Edu. 202, Method & Man-	
Phy. 201, Engineering		agement 2	2
Or Consul		Phy. 204, General	
Bot. 101, General Edu. 201, History of		Phy. 202, Engineering	
Modern Education 2	2	Electives (approx.)9	9
Electives (approx.) 9	9	Military Science(3)	)
Military Science		Physical Education	
Physical Education		(Women)(3)	,
(Women)(3)			

# THE SCHOOL OF EDUCATION

## SUGGESTED SOPHOMORE ELECTIVES

SOGGESTED SOTTIO	MORE EDECTIVES
FIRST SEMESTER	SECOND SEMESTER
Hrs.   Cr.   3 (4) 4 1-3	SECOND SEMESTER
Home Economics	
Manual Training	
Other Vocational Work	
JUNIOR	YEAR
FIRST SEMESTER	SECOND SEMESTER
Hrs. Cr.	Hrs. Cr.
Edu. 301, Psychology 3 3 Edu. 308, Child Study 2 2	Edu. 302, Applied Psychology
	Psychology
SUGGESTED JUN	IOR ELECTIVES
FIRST SEMESTER	SECOND SEMESTER
Foreign Language 3	Hrs. Cr.
Foreign Language	Foreign Language
Chem. 305, General Organic	Food 1 (6) 3 Hist. 202, U. S 3 3 Soc. Sci. 304, Social
Organic       3       (7)       5 1-3         Hist.       301, English       3       3         Soc.       Soc.       301, Sociology       2       2         Eng.       303, American       2       2         Literature       2       2	Soc. Sci. 304, Social
Soc. Sci. 301, Sociology 2 2 Eng. 303, American	Problems
Literature 2 2	Literature 2 2
Agriculture or	Agriculture or
Home Economics	Home Economics
Other Vocational Work	Other Vocational Work
SENIOR	
FIRST SEMESTER Hrs. Cr.	SECOND SEMESTER Hrs. Cr.
Edu. 405, Ethics	Edu. 406, Logic
Edu. 407, Philosophy of Education	Edu. 408, Administration & Supervision
SUGGESTED SEN	
FIRST SEMESTER	SECOND SEMESTER
Hist. 401, Modern	Hist. 402, Modern
Europe 3 3	Europe 3 3
	Fag 406 The Novel 2
Eng. 405, The Novel 2 2 Enty. 303, Horticultural 2 (4) 3 1-3	Eng. 406, The Novel 2 2 Enty. 306, Apiculture 3 (2) 3 2-3
Zool, 401, General	Eng. 406, The Novel
Eng. 405, The Novel 2	Enty. 306, Apiculture 3 (2) 3 2-3 Zool. 402, Embryology 2 (4) 3 1-3 Bact. 402, Sanitary
Bact. 401, Sanitary 2 (4) 3 1-3 Soc. Sci. 401,	Soc. Sci. 402, Political
Bact. 401, Sanitary	Soc. Sci. 402, Political         2           Theory         2           Foreign Language         3
Bact. 401, Sanitary	Soc. Sci. 402, Political Theory Foreign Language
Bact. 401, Sanitary 2 (4) 3 1-3 Soc. Sci. 401, Government 2 2 Foreign Language 3 Agriculture or Home Economics	Soc. Sci. 402, Political   Theory   2   2   Foreign Language   3   3   Agriculture   or   Home Economics
Bact. 401, Sanitary 2 (4) 31-3 Soc. Sci. 401, Government 2 2 Foreign Language 3 3 Agriculture or	Soc. Sci. 402, Political   Theory

The candidate for graduation from the School of Education must have good foundation work in the Biological Sciences; Botany, Zoology, Physiology are recommended.

Electives in Agriculture, Agronomy, Dairying, Horticulture, Entomology, Animal Husbandry, will be found by referring to the courses of study in the School of Agriculture. Students in the School of Education may elect any subject in the School of Agriculture for which they have the prerequisite.

Electives in Home Economics, Domestic Science and Domestic Art will be found in the School of Home Economics. Students in the School of Education may elect any subject in Home Economics for which they have the prerequisite.

A grade in Agriculture is required for a certificate, and to meet this requirement, men will be expected to take at least two semesters' work in Agriculture, and they are advised, if possible, to begin the election of Agriculture in the Freshman year.

A grade in Domestic Science is required for a certificate, and women will be expected to take at least two semesters' work in Home Economics, which work they are advised to begin electing in the Freshman year, or as early as possible.

# DEPARTMENT OF EDUCATION AND SOCIAL SCIENCE

JOHN H. BOWERS, Professor CHARLES W. BRILES, Associate Professor

## SUBJECTS

#### Education

# 101 Psychology. Class 2 hours. Credit 2.

The aim of this course is to teach the fundamental principles of psychology as a preparation for successful study and profitable school work, to teach the conditions, processes and laws of mental development and the motives and forces that give rise to human conduct.

## 102 Principles of Education. Class 2 hours. Credit 2.

This course deals with the general principles which underlie the work of teaching and of learning, and the application of such principles to educational processes. The content of this course is sometimes called Theory and Practice.

# 201 History of Modern Education. Class 2 hours. Credit 2.

The purpose of this course is to help arrive at correct notions of what ought to be done in the light of what has been done in education, and to study the diversity of ideals and the best methods for future advancement. The lives and works of great educators is made a source of inspiration and guidance.

#### 202 Methods and Management. Class 2 hours. Credit 2.

The methods of teaching the different school subjects will be presented along with classroom management. Conducting the recitation, governing the school and securing cooperation and like practical problems will be discussed.

#### 301 Psychology. Class 3 hours. Credit 3.

This course will give the fundamentals of physiological psychology, and a study of the main problems and methods of psychology, sensation, attention, habits, association of ideas, perception, memory, imagination, conception, judgment, reasoning, emotion, volition and personality.

#### 302 Applied Psychology. Class 3 hours. Credit 3.

This course deals with the application of the laws and methods of psychology to problems of life and the work of teaching.

## 308 Child Study. Class 2 hours. Credit 2.

This course studies the aims and methods of child study, the problems of interest, personality and habit formation, the states of development in childhood and adolescence, and the problems of child welfare.

## 307 Rural Education. Class 2 hours. Credit 2.

This course deals with the problems of rural school support, administration, supervision, management, and how to make the rural school meet the needs of rural life.

## 405 Ethics and Moral Education. Class 2 hours. Credit 2.

The fundamental principles of the moral life are studied along with the moral ideals and methods of the individual, the family, the State and other social institutions. The aim is to understand such moral principles as will promote both individual and social welfare, and how these principles operate in character building and in school work.

# 406 Logic and the Learning Process. Class 2 hours. Credit 2.

A study of the laws of thinking and the processes of true reasoning. Common errors in thinking with the causes for such errors are pointed out, and also guiding principles for correct thinking processes, and for scientific study and investigation.

# 407 Philosophy of Education. Class 2 hours. Credit 2.

A brief study of educational aims and values, such as vocational education, social education, disciplinary education, cultural education, health education, moral education, and the best means of attaining these ends in the schools.

# 408 School Administration and Supervision. Class 2 hours. Credit 2.

A study of the curriculum, organization, finance and administration of country schools, town schools and city schools, and the powers and duties of school executives.

# 430 Educational Measurements. Class 2 hours. Credit 2.

A study of the Courtis tests in reading, writing and arithmetic; Hillegas' tests in composition; the Ayers and Thorndike tests in writing; and a study of the general problems of determining standards of attainment.

One of the courses in education to be taken by those who expect to teach in the public schools should be the theory and practice of teaching that subject which the student has chosen as his major.

Election may be made from the following courses:

- 403 Agricultural Education. Class 2 hours. Theory and practice teaching.
- 410 Manual Training Teaching. Class 2 hours. Theory and practice teaching.
- 411 Home Economics Teaching. Class 2 hours. Theory and practice teaching.
- 412 Science Teaching. Class 2 hours. Theory and practice teaching.
- **414 Teaching Mathematics.** Class 2 hours. Theory and practice.
- 415 History Teaching. Class 2 hours. Theory and practice.
- 416 English Teaching. Class 2 hours.
  Theory and practice.
- 417 Public School Drawing. Class 2 hours.
  Theory and practice teaching.
- 418 Public School Music Teaching. Class 2 hours. Theory and practice teaching.
- 419 Primary Teaching. Class 2 hours. Theory and practice.

#### Social Science

301 Sociology and Social Welfare. Class 2 hours. Credit 2.

A brief study of the conditions of social life, social psychology, social organizations, social development, social control, social institutions, and the factors involved in social progress and social welfare.

304 Social Problems. Class 2 hours. Credit 2.

A study of rural social life and rural welfare along with the problems of poverty, public health, social insurance, and the legal and spiritual remedies for some of our greatest social defects.

401 Government and Political Methods. Class 2 hours. Credit 2.

The object is to teach the actual methods of self-government; to make an impartial study of the methods by which political parties organize and conduct their campaigns, along with the improvements that might be made in party methods and in actual government.

402 Political Theory. Class 2 hours. Credit 2.

A survey of the forms through which governments have evolved, of the principles of government, and of the actual practices of our American State and National Governments.

## THE

# SCHOOL OF COMMERCE AND MARKETING

H. W. Moorhouse, Dean

This course has been planned to give students an understanding of business and business relationships. Commerce, industry and trade have become so complex that men engaged in such activities must have a thorough knowledge of business methods and economic principles.

Commerce, which was once limited to small, restricted areas, now, with modern transportation and communication, covers the entire earth. Marketing, at one time a single transaction, is now an intricate process, weaving its way through a maze of varied industry and business.

Since the great majority of students enter some branch of industry, it is important that opportunity should be given in a course of this kind to gain a grasp of fundamental business principles.

The largest single group of subjects is taught by the Department of Economics and Marketing. These subjects give young men breadth of view in business affairs and train them in the execution of details for the purpose of preparing them for active management in the world of industry. The description of these courses on another page shows the scope and strength of the work.

There is ample opportunity for electives in other departments. The business man must be broad-guaged. He is constantly called upon to meet a vast variety of problems. The banker, for instance, should know livestock. The merchant and manufacturer should understand the uses of chemistry. Every business is vitally related to every other business and to science, history and psychology.

In agriculture the student can take Commercial Grades of Grain, Livestock Judging, Cotton Grading, Fruit Packing and Grading; in business training, Bookkeeping, Typewriting, Shorthand; in science, Chemistry, Petroleum Technology, Investment and Insurance Mathematics.

Spanish, German and French languages are offered for the benefit of the men who may want to represent corporations or the Government abroad. Other valuable electives are History, Journalism, Public Speaking and Psychology. These and many additional subjects in other departments can be used by the student in pointing his study in the direction of his special interests.

It is believed that this course gives a broad, deep grasp of business knowledge and that the graduate who has initiative and is willing to work will always make a big place for himself in his chosen field of affairs.

#### COURSES IN

#### THE SCHOOL OF COMMERCE AND MARKETING

The following outline of study represents the required and elective work in the School of Commerce and Marketing. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject and the even numbers, as 102, the second semester's work. Subjects of the Sophomore, Junior and Senior years are numbered accordingly, two hundred for Sophomore, three hundred for Junior and four hundred for Senior work. One hour of laboratory period is equivalent to one-third of a classroom period in estimating the number of hours per week to be taken.

The total requirements for graduation are 128 credits exclusive of any credits given in military science and physical education. Students will not be allowed to register in less than 12 nor more than 20 credit hours. Sophomore electives are open to Juniors and Seniors where

\*Spanish, German or French.

the necessary prerequisite work is taken.

In the outline below figures without parenthesis indicate hours of classwork, in parenthesis, hours of laboratory work.

# SUBJECTS

# FRESHMAN YEAR

FIRST SEMESTER	SECOND SEMESTER
Chem. 101, Inorganic       Hrs. 3 (4) 4 1-3         Eng. 101, College       3 3         Econ. 103, Products of Commerce       3 3         Bus. 103, Typewriting       (10) 3 1-3         Pub. Spk. 123, Essentials of Pubic Speaking       1 (2) 1 2-3         Physical Education       (3)         Military Science       (3)	Hrs.   Cr.   2 (4) 3 1-3
SOPHOMO	RE YEAR
FIRST SEMESTER	SECOND SEMESTER
Hrs. Cr.	Hrs. Cr.
Econ. 201, Principles of	Econ. 202, Principles of
Economics	Marketing 3 3 Econ. 204, Labor
*Foreign Language 3	Economics 3
Electives 7 2-3 7 2-3	*Foreign Language 3
	Electives 7 2-3 7 2-3
JUNIOR	YEAR
FIRST SEMESTER	SECOND SEMESTER
Hrs. Cr.	Hrs. Cr.
Econ. 301, Business	Econ. 306, Accounting 3  Econ. 310, Insurance 3
Organization	Econ. 310, Insurance 3 3 Econ. 312, Salesmanship 3 3
Bus. 301, Bookkeeping 2 (3) 3	Electives 7 7
Electives 7 7	
SENIOR	YEAR
FIRST SEMESTER	SECOND SEMESTER
Hrs. Cr.	Hrs. Cr.
Econ. 415, Foreign Trade 3 Econ. 417, City Economics 2	Econ. 410, Domestic
Econ. 417, City Economics 2 2 Econ. 419, Taxation 3 3	Markets 2 2 Econ. 414, Rural
Econ. 421, Traffic Rates 3	Economics 2
Electives 5 5	Econ. 418, Business
	Administration
	Business

## Electives for Commerce and Marketing

Commerce and Marketing students may elect subjects offered by the following departments, subject to the approval of the dean of the School of Commerce and Marketing:

## Group I-Agriculture

Department of Animal Husbandry.

Department of Dairy Husbandry. Department of Poultry Husbandry.

Department of Agronomy. Department of Horticulture.

Department of Farm Engineering.

#### Group II-Office Training

\*Department of Business Training.

# Group III-English, Public Speaking and Foreign Language

Department of English.

Department of Foreign Languages.

Department of Public Speaking.

#### Group IV-Science

Department of Chemistry. Department of Mathematics.

Department of Physics.
Department of Biology.
Department of Petroleum Technology.

# Group V-Pedagogy, Sociology and History

Department of History.

Department of Education and Social Science.

\*Credit in this department is limited as follows: Shorthand 12, Typewriting 6 2-3, Bookkeeping 6 2-3. 0----

## DEPARTMENTS OF ECONOMICS AND MARKETING

H. W. MOORHOUSE, Professor J. T. HORNER, Assistant

# SUBJECTS

## 103 Products of Commerce. Class 3 hours. Credit 3.

An elemental study of the materials and industries essential to man and the basis of all trade, such as the cereals, cattle, fisheries, sugar, textiles, paper, leather, rubber, manufacturing, forest and mineral industries.

Text: Industrial and Commercial Geography, Smith.

# 104 Geography of Commerce. Class 3 hours. Credit 3.

A study of products in relation to location. A survey of the ocean trade routes of all the continents, of the Panama canal and world commerce, of the trade center and its development, of the influence of geographic factors on the commercial policy of Nations.

Text: Industrial and Commercial Geography, Smith.

## 201 Principles of Economics. Class 3 hours. Credit 3.

A presentation of the foundation principles of all business. An analysis of the production, consumption and distribution of wealth, of price movements and causes. An introduction to the study of money and banking, business organization, insurance, public finance, etc.

Prerequisite for all economic subjects except Econ. 103 and 104.

Text: Outlines of Economics, Ely.

## 202 Principles of Marketing. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A thorough examination of the following factors in their relation to marketing; the product, price, instruments of exchange, transportation, exchanger, the exchange, salesmanship, buyership, cooperation, governmental activities, etc.

Text: Marketing Farm Products, Weld.

# 203 Transportation. Class 3 hours. Credit 3.

Prerequisite or concurrent: Econ. 201.

This course deals primarily with railroad economics, but some attention is given to water and highway transportation. The subject includes a history of railroad development in the United States, showing present problems and the relation of transportation to commerce. Railroad administration in foreign countries is investigated and study is made of governmental ownership.

Text: Elements of Transportation, Johnson.

## 204 Labor Economics. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A study of labor conditions from the standpoint of manager and laborer. A survey of scientific management, wage systems, factory laws, accident compensation, strikes, compulsory arbitration, organized labor, woman and child labor, welfare work, etc.

Text: Organized Labor in America, Groat.

# 301 Business Organization. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

The one-man business, partnership and corporation are studied and compared. Special emphasis is placed on the corporation in its many ramifications as holding company, merger, amalgamation, trust, etc. Pooling agreements, promotion, sale of securities, receivership, and Government regulation are covered thoroughly.

Text: Business Organization and Combination, Haney.

# 303 Banking. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

The relation of money and credit to every business activity is shown and studies are made of the currency systems of this and foreign countries. Special attention is given to an analysis of commercial and investment paper. A thorough survey is made of the history, organization and present operation of national banks, state banks, trust companies, treasury system, Federal reserve banks, Federal land banks, etc.

Text: Money and Banking, Scott.

306 Accounting. Class 3 hours. Credit 3. Prerequisite: Econ. 201, 301; Bus. 301.

A thorough course in the theory and technique of accounts, including a review of the principles of single and double entry accounting systems, the financial books, classification of accounts, the asset accounts, the liability accounts and financial statements, such as the balance sheet, the statements of affairs, statements of income and profit and loss, etc.

Text: Applied Theory of Accounts, Esquerre.

#### 308 Business for Women. Class 2 hours. Credit 2.

An explanation of the common instruments of business and of important economic principles. An examination of marketing problems with special reference to products bought for the home. A comparison of wholesale and retail, direct and indirect, cash and credit buying. Also a description of practical plans for household accounting.

Text: Reducing Cost of Living, Nearing.

310 Insurance. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A study of life, property, and social insurance. A survey of the various forms of insurance organizations and a close analysis of mortality tables, the policy contract, premium, the interest basis, investments, relation of the State to insurance, etc.

Text: Principles of Insurance, Gephart.

312 Salesmanship. Class 3 hours. Credit 3.

Prerequisite: Econ. 201-202.

A survey of the principles of salesmanship. Selling talks, sales letters and advertising copy are analyzed and practice in their preparation and application is given. Lessons are drawn from sales departments of large corporations. Goods, prices and market conditions are studied.

Text: Personal Efficiency and Selling, Allen.

406 Laws of Business. Class 2 hours. Credit 2.

Prerequisite: Econ. 201.

Contracts are emphasized because no business transaction is possible without either a verbal or written contract. The methods of making, enforcing and terminating contracts, the statute of frauds, actions for damage, etc., are examined. Also a study of personal property, fixtures, agency, negotiable instruments, bailments, insurance, corporations, partnerships, etc.

Text: Manual of Commercial Law, Spencer.

407 Cost Accounting. Class 3 hours. Credit 3.

Prerequisite: Econ. 201, 306; Bus. 301.

The principles and methods of cost accounting are presented in a simple and direct manner so that the student may be able to grasp them quickly and become thoroughly familiar with the theory of cost accounting and its relation to the general accounting system. The functions of costs and their relation to management is first studied; cost systems by which costs are determined are taken up and examined; and the interpretation of the cost data is given special attention. Text: Cost Accounting, Nicholson.

#### 410 Domestic Markets. Class 2 hours. Credit 2.

Prerequisite: Econ. 201, 202, 305.

A special study is made of the products of the various sections of the United States, the transportation routes which these take to their respective domestic markets, the market machinery, the prevailing prices, the prices covering a period of years, the finished product which results, etc.

#### 414 Rural Economics. Class 2 hours. Credit 2.

Prerequisite or Concurrent: Econ. 201.

A study of farm business and rural life. A view of the relation of the farm home, social life, good roads, community cooperation, tenantry, soil conservation, standardization of crops, rural credits and better marketing to rural progress. A broad view of the possibilities of reorganizing agriculture and rural life. A thorough survey is made of rural conditions in foreign countries, United States and Oklahoma.

Text: How Farmers Cooperate, Poe.

## 415 Foreign Trade. Class 3 hours. Credit 3.

Prerequisite: Econ. 201, 202.

The principles on which foreign trade is based and developed are emphasized. United States consular reports and statistical information bearing on exports and imports of various countries are analyzed. Inquiries are made into opportunities for international trade development.

Text: Trade of the World, Whelpley.

## 417 City Economics. Class 2 hours. Credit 2.

Prerequisite: Econ. 201.

A view of municipal administrative problems. The franchise and the regulation and ownership of public utilities are subjects for special consideration. Special attention is also given to the commission and city manager forms of government,

Text: The Modern City and Its Problems, Howe,

#### 418 Business Administration. Class 3 hours. Credit 3.

Prerequisite: Econ. 201, 301, 303.

Actual practice in planning and executing business enterprises. Boards of directors' meetings are held, committee work assigned, etc. The grasp of each student of the enterprise as a whole and his ability to master details are thoroughly tested.

Text: Getting the Most Out of Business, Lewis.

#### 419 Taxation. Class 3 hours. Credit 3.

Prerequisite: Econ. 201.

A general consideration of questions of public finance. The general property tax, the income and inheritance taxes, and all methods of taxation in use in Oklahoma and the United States are studied.

Text: Taxation, Fillebrown.

# 421 Traffic Rates. Class 2 hours. Credit 2.

Prerequisite: Econ. 201, 305.

Traffic problems of railroads, particularly, are examined carefully. A close comparison is made of land and water rates between certain points, and of freight and express shipments. Questions of routing and adjustment of claims, etc., are reviewed, and freight classification

in its relation to the making of rates is especially emphasized. The reports of State Railroad Commissions and the Interstate Commerce Commission are analyzed.

Text: Freight Classification, Strombeck.

#### 422 Laws of Business. Class 3 hours. Credit 3.

Same as Econ. 406, except that it includes also a study of cases.

Text: Manual of Commercial Law, Spencer.

# 423 Auditing. Practice 4 hours. Credit 11/3.

Prerequisite: Econ. 201, 306; Bus. 301.

The duties of the auditor are studied and correlated with those of the accountant and cost accountant. Special attention is given to the qualifications of the auditor and the methods of conducting an audit. Practical problems are worked out.

#### DEPARTMENT OF BUSINESS TRAINING

S. C. Bedinger, Professor
A. C. Doering, Assistant Professor
Willard Rude, Instructor

#### Two-Year Course

The two-year course in business training is open to students who have completed the eighth grade or can pass a satisfactory entrance examination in common school subjects. Applicants must be at least eighteen years of age. Application for advanced standing should be made to the head of the department.

At the completion of the work, the student is given a certificate showing that he has completed the prescribed course in business training.

## Outline of Courses in the Department of Business Training, Giving Subjects and Hours

#### FIRST YEAR

FIRST SEMESTER	SECOND SEMESTER
Bus. 1, Arithmetic 3 Bus. 3, Bookkeeping (10) Business English 3 Bus. 5, Spelling & Penmanship Bus. 7, Shorthand or Stenotypy. 4 Bus. 9, Typewriting (5)	Bus. 2, Arithmetic 3 Bus. 4, Bookkeeping

#### SECOND YEAR

FIRST SEMESTER		SECOND SEMESTER	
	Hours		Hours
Bus. 63. Salesmanship	2	Bus. 52, Office Training	2
Bus. 59, Business Law	3	Bus. 54, Spelling & Penmanship	(3)
Bus. 61, Commercial Geography		Bus. 56, Typewriting	(10)
Bus. 57. Dictation		Bus. 58, Business Law	
Bus. 53, Spelling & Penmanship		Bus. 60, Dictation	(8)
Bus. 55, Typewriting		Bus. 62, Business Economics	
Pub Sok 121 Fesentials		Pub. Spk. 122. Essentials	

## SUBJECTS

#### .1-2 Arithmetic. Class 3 hours. Credit 3.

The nonessentials are entirely omitted in this work. Those parts are given which contribute to business efficiency, such as: Aliquot parts, fractions, interest and discount, storage, percentage, profit and loss, partnership settlements, equation of accounts and partial payments.

## 3-4 Bookkeeping. Class 10 hours. Credit 31/3.

This course covers the different and various lines of industries. First, elementary work is given in the fundamental principles of debit and credit, followed by work in columnar books and statements of various kinds. There is special work in the closing of ledgers, the making of special business, trading, profit and loss and financial statements. In the more advanced work is included: Partnership and corporation accounting, special cost accounting, and work in the following particular lines: Banking, real estate, insurance, railroad station work, manufacturers' and jobbing and commission accounting. The thorough work in the above lines is supplemented with an auditing department where the functions of this subject are taught and its relation to the other departments shown.

#### 301 Bookkeeping. Class 2 hours, bookwork 3 hours. Credit 3.

The principles in this course are the same as in Business 3 and 4, but presented in condensed form.

## 5-6-53-54 Spelling.

All persons taking the Business Course must carry this subject. Thousands of positions are each year either not secured or lost on account of bad spelling. The value of spelling to the stenographer especially is obvious. The same is almost equally true with the bookkeeper. The work in spelling is always written. Students are required to make a grade of 95% on examination in the subject before securing a diploma.

# Penmanship.

The business world demands that penmanship should be plain, rapid, easily written and easily read. Slow writing is out of date. The student is taught the arm or muscular movement method. At first considerable time is spent on movement drills in order to develop a good foundation; this is followed by intermediate drills, and finally the letters, according to principles and frequency of occurrence. A great deal of time is spent on sentence practice and letter writing. The development of a small, rapid, condensed handwriting is the end in view.

## 7-8 Shorthand. Class 4 hours. Credit 4 each.

This course covers thoroughly the Shorthand Manual and gives the student a thorough knowledge of the principles of the shorthand system, work signs, contraction and phrases, etc. This is followed by a large amount of dictation. The Gregg System is taught.

# 101-102 Shorthand. Class 4 hours. Credit 4 each. Similar to Bus. 7 and 8.

9 Typewriting. Machine work 5 hours. Credit 13/3.

10 Typewriting. Machine work 8 hours. Credit 23/3.
Prerequisite: Bus. 9.

The touch system is employed. Mastery of the keyboard and a general knowledge of the mechanism of all standard machines. Requirements: First ten lessons in rational typewriting, or the equivalent, and a speed of twenty words per minute from copy matter. Speed drills and instruction in the care and adjustment of the typewriter. For stenographers, drills in transcription from shorthand notes and construction of letters. Nine hours per week. Requirements: Completion of all lessons in the manual up to Lesson 26, and a speed of thirty words per minute. Copy matter.

55 Typewriting. Machine work 8 hours. Credit 23/3.

Prerequisite: Bus. 9 and 10.

56 Typewriting. Machine work 10 hours. Credit 31/3.

Prerequisite: Bus. 9, 10, 55.

Completion of the lessons in the manual. Drills in speed writing from manuscripts and rapid transcription from shorthand notes, including business letters and miscellaneous matter. Requirements: A speed of forty words per minute from copy matter; from shorthand notes, new matter, transcribed at the rate of twenty words per minute. Rapid transcription from shorthand notes. Dictation direct to the machine. Legal forms, stencil-cutting and care of the machine. Requirements: A speed of fifty words per minute from copy matter, with not over five errors; from shorthand notes, transcribed at the rate of thirty-five words per minute, from new matter. All papers to be graded by the International Typewriting Rules.

103, 104 Typewriting. Machine work 10 hours. Credit 31/3.

51 Business Correspondence. Class 3 hours. Credit 3.

A practical knowledge regarding the art of selling by mail is given in this subject. Selling personal services, selling merchandise, or anything else where the art of selling is involved, is carefully taught; in other words, successfully doing business by letter.

52 Office Training. Class 2 hours. Credit 2.

This course is to meet the great needs of the stenographer who goes to work in an office. After completing the shorthand manual and taking up dictation the student is then ready for this course. It is intended to put the finishing touches to the student's knowledge of shorthand and typewriting. Thorough instruction is given in business ethics, the mechanics of letterwriting, uses of business forms and papers, filing, bills, shipping, duplicating, constructing business letters, rough draft, and, in fact, any other work likely to come under the student's supervision in an office.

58-59 Business Law. Class 3 hours. Credit 3.

This subject takes up contracts, negotiable paper, partnership, sale of chattels, interest, usury, wills, conveyances of real estate, mortgages, etc.

57-60 Dictation. Practice 8 hours. Credit 23/3.

The work on the manual and that of dictation are by no means separate and distinct, since dictation begins early in the theory work, and theory continues through dictation. However, the second semester of the work is more largely dictation. Before advancing to office

practice the student should develop sufficient ability to write new matter from dictation at an average speed of seventy-five words a minute for a period of half an hour. New matter at the rate of 100 words a minute for five minutes, transcribed accurately, is required for graduation.

#### 61 Commercial Geography. Class 3 hours. Credit 3.

This comprises a study of the location of the sections that produce the different cereals, ores, fruits, vegetables, and, in fact, all commodities that are produced or handled in this country, and the relation they sustain to the country and its commerce.

#### 62 Business Economics. Class 3 hours. Credit 3.

This subject treats of those social conditions that are due to the wealth-getting and wealth-using activities of man; and which deal with all phases of his life insofar as they affect his social activity in this respect.

## 63 Salesmanship.

The students of today have a great opportunity for real leadership in the smaller towns and cities, as well as the large centers of this country. To succeed to this leadership they must understand the psychology of salesmanship.

# 402 Office Administration. Class 1 hour, office work 2 hours. Credit 1%.

Prerequisite: Bus. 101, 102.

In this course the principles underlying the organization and management of an office and the employes are carefully analyzed. The following subjects are examined: The office, equipment, heating, lighting and ventilation; office employes, their selection, training, experience and salary; office appliances; mechanical aid in office work; relation between manager and employes; human touch, efficiency; office records and systems; correspondence filing, card indexing, order systems, credits, collections, advertising, sales, and the purchase and handling of supplies.

# Typewriting Rates

15 hours a week, one semester	3.00
10 hours a week, one semester\$	2.00
5 hours a week, one semester\$	1.00
Stenotypy Rates	
First semester\$	1.00
Second semester \$	1.00

Special students, or those taking typewriting where it is not a required subject in their course, will be charged \$2.50 a semester regardless of hours taken.

# THE SCHOOL OF VETERINARY MEDICINE

L. L. Lewis, Dean and Professor of Veterinary Medicine
W. P. Shuler, Assistant Professor
E. A. Benbrook, Instructor
F. S. Hathaway, Instructor
Instructor

The growing importance of the livestock industry of the State has made a course in Veterinary Medicine a necessity. The work is outlined so as to provide a thorough and well-balanced course of instruction leading to the degree of Doctor of Veterinary Medicine.

The entrance requirements to this course of study include the presentation of 15 units of high school work. (See entrance credits in first of catalog for detailed statement.)

Candidates for the degree of Doctor of Veterinary Medicine must have attained the age of twenty-one years and satisfactorily completed all of the course as outlined.

There are many opportunities in professional and scientific work for young men of thorough training in veterinary medicine. In order to meet the demands that are made on those entering the field of private practice or positions requiring technical knowledge, the veterinarian must have a good general education in addition to the specialized work in veterinary medicine.

Some of the more prominent fields of work open to veterinarians are as follows:

Private Practice.—There are many good fields of work, not only in Oklahoma, but in other States. There is a growing interest in the South in the livestock business, and as money invested in livestock increases, so will the demand for competent veterinarians.

Civil Service.—Much important work in the United States Department of Agriculture is open only to men who are graduates from veterinary colleges.

State and City Work.—The position of State and Assistant State Veterinarians and municipal food inspectors are open as a rule only to qualified veterinarians.

The army service also offers a field of work that is becoming attractive to qualified men.

#### COURSES IN THE SCHOOL OF VETERINARY MEDICINE

The following outline of study represents the required work in the School of Veterinary Medicine. The courses are numbered, beginning with one hundred in the Freshman year; odd numbers, as 101, represent the first semester's work in the subject, and the even numbers, as 102, represent the second semester's work. Freshman and higher class subjects are numbered as hundreds, one hundred for Freshman work, two hundred for Sophomore work, etc. The laboratory work is in parenthesis, and three hours of this work is equivalent to one theory hour or 1 credit. To graduate, a student must complete the following course as outlined. Registration will not be permitted in less than twelve nor more than twenty credit hours.

FRESHMAN YEAR					
FIRST SEMESTER SECOND SEMESTER					
V. M. 101, Anatomy	rs. (6) (4) (2) (4) (3) (3)	Cr. 4 3 1-3 2 2-3 4 1-3	V. M. 102, Anatomy 2 (6) V. M. 104, Histology 2 (4) Chem. 102, Inorganic 2 (4) Zool. 402, Embryology 2 A. H. 202, Breeds 2 (3) Military Science (3) Physical Education (3)	3 1-3 3 1-3 12 3	
	SO	РНОМОН	RE YEAR		
FIRST SEMESTER			SECOND SEMESTER		
V. M. 211, Physiology 3 V. M. 209, Parasitology 2		Cr. 4 3 3 1-3 3 2-3 2 2-3	V. M. 202, Anatomy 2 (6) V. M. 204, Materia Medica 3 V. M. 206, Pathology 2 (4) V. M. 212, Physiology 3 (2) V. M. 208, Pharmacy 1 (3) A. H. 306, Animal Nutrition 3 Military Science (3)	3 1-3 3 2-3 2	
	]	UNIOR	YEAR		
FIRST SEMESTER			SECOND SEMESTER		
V. M. 301, Theory & Practice 3 V. M. 317, Therapeutics 3 V. M. 305, Surgery 2 V. M. 305, Surgery 2 V. M. 303, Clinical Diagnosis 2 V. M. 311, Special Pathology 1 V. M. 319, Soundness V. M. 321, Restraint 1	(4) (3) (2) (2) (7)	Cr.  3 3 2 1 1-3 2 2 2-3 2-3 2 1-3	V. M. 302, Theory & Hrs.  Practice 4 V. M. 304, Therapeutics 4 V. M. 306, Surgery 3 V. M. 310, Bacteriology 3 V. M. 314, Clinic (6)		
FIRST SEMESTER	5	SENIOR	YEAR SECOND SEMESTER		
V. M. 401, Theory & H:  V. M. 403, Surgery	(4) (7)	Cr. 4 3 4 1-3 1 3 2 1-3	V. M. 402, Theory & Hrs.  Practice	Cr. 4 2 1 2-3 2-3 3 3 1-3	
			V. M. 416, Jurisprudence 1 V. M. 414, Clinie		

## Description of Courses and Equipment

The equipment used for instruction in veterinary medicine includes that of the laboratories of bacteriology, physiology, chemistry, zoology, etc. Such facilities will enable students to undertake their work with all conveniences and equipment afforded by well established courses of instruction.

#### **SUBJECTS**

101 Anatomy. Class 2 hours, laboratory 6 hours. Credit 4. Osteology and myology of head and neck.

A comparative study of the muscles of the head and neck of the horse. Instruction in anatomy extends over a period of two years and is given by lectures, recitations and laboratory work. Each student is required to make one or more complete dissections of the horse, with comparative dissections of the trunk and viscera of other domesticated animals.

102 Anatomy. Class 2 hours, laboratory 6 hours. Credit 4. Myology of the thoracic limb and trunk. Prerequisite: Anat. 101.

103 Histology. Class 2 hours, laboratory 4 hours. Credit 31/3.

Histology is microscopic anatomy and in the allotted time the student is required to collect, prepare and make drawings of all the different tissues of the body. This course is necessary in order that the later instruction in the various disease processes may be fully understood.

104 Histology. Class 2 hours, laboratory 4 hours. Credit 31/3.

A continuation of the work of the previous semester.

Text: Normal Histology, Piersol.

Reference: Ferguson, Davidhoff, Huber; Gould's Pocket Medical Dictionary.

201 Anatomy. Class 2 hours, laboratory 6 hours. Credit. 4.

Myology of pelvic limb and splanchnology.

Prerequisite: Anat. 101, 102.

In addition to the dissection of the muscles and ligaments of the pelvis and hind limb, dissections of the organs and viscera of the trunk will be commenced and continued through the next semester.

202 Anatomy. Class 2 hours, laboratory 6 hours. Credit 4.

Angiology and neurology.

Prerequisite: Anat. 101, 102, 201.

The work of this semester will be a continuation of the dissections of the viscera and will include a special study of the circulatory and nervous systems of the horse. Surgical regions are especially emphasized.

Text: Comparative Anatomy of the Domestic Animals, Sisson.

203-204 Materia Medica. Class 3 hours. Credit 3.

Prerequisite: Freshman Chem, 101 and 102.

Materia medica is a subject that deals with the origin, derivation, physical and chemical properties and tests of purity of medical materials. The subject is taught throughout the second year, the first half being inorganic and the second half organic.

Text: Materia Medica and Therapeutics, Winslow.

205-206 General Pathology. Class 2 hours, laboratory 4 hours. Credit

Prerequisite: Vet. Med. 103 and 104.

A study of the effects of disease processes upon the body tissues and fluids without reference to any particular disease. In the laboratory these processes are studied and drawn with the aid of the microscope and projectoscope. The students are instructed in laboratory technique.

208 Pharmacology. Class 1 hours, laboratory 3 hours. Credit 2.

A lecture and laboratory course given to the second-year class during the second semester, embracing a study of the theory of pharmaceutical methods and operations and the compounding of various preparations with special reference to prescription work.

No text.

209 Parasitology. Class 2 hours, laboratory 2 hours. Credit 2<sup>2</sup>/<sub>3</sub>.

A study of internal and external parasites of the domestic animals is taken up and their methods of control and eradication discussed.

211-212 Comparative Physiology. Class 3 hours, laboratory 2 hours. Credit 32/3.

By aid of lectures, demonstrations and tests the comparative physiology of the domesticated animals is presented in a thorough

and practical manner.

The veterinary students have access to the well equipped physiology laboratory of the School of Science and Literature and are given every opportunity to demonstrate the functions of the different organs of the body by the aid of modern apparatus.

301 Theory and Practice. Class 3 hours. Credit 3.

302 Theory and Practice. Class 4 hours. Credit 4.

Theory and practice includes a study of the diseases of domesticated animals, their diagnosis and treatment as met in routine practice. This subject is taught for two years. In that length of time it is intended by means of lectures and clinics to acquaint the student with as great a variety of abnormal conditions as possible and instruct him in their diagnosis and treatment.

303 Clinical Diagnosis. Class 2 hours. Credit 2.

In presenting this subject, it is the intention of the instructor to condense, review and emphasize the methods used in diagnosing diseases.

304 Therapeutics and Toxicology. Class 4 hours. Credit 4.

Therapeutics is a study of the use of all agents that are of value in the treatment of diseases and the relief of pain. Thus it is the application of the previous course in materia medica, with the additional

emphasis on the toxication of drugs and antidotal measures to be employed in combating them.

305 Surgery. Class 2 hours. Credit 2.

306 Surgery. Class 3 hours. Credit 3.

Prerequisite: First and second-year anatomy.

The theory of veterinary surgery is given the third and fourthyear students in connection with the theory and practice of medicine and the hospital clinic.

Methods of restraint, the use of different anesthetics and the general principles of surgical technique are taught the first semester of the Junior year. The different surgical diseases are then studied and discussed.

The clinic offers practical demonstrations of the principles discussed in class.

307 Surgical Anatomy. Laboratory 4 hours. Credit 11/3.

Prerequisite: Anat. 101, 102, 201, 202.

A review of the previous course, with special reference to the general topography and various surgical areas of the horse, ox, dog and pig.

Text: Comparative Anatomy, Sisson.

Reference: Surgical Anatomy, Share, Jones.

311 Special Pathology. Class 1 hours, laboratory 3 hours. Credit 2. Prerequisite: Vet. Med. 205 and 206.

This work includes a study of disease processes in the different organs of the body and specific diseases. An introduction to postmortem technique and, when autopsies are available, the student will be taught to apply his knowledge in a practical way.

Text:

Reference:

- 313 Clinic. Laboratory 7 hours. Credit 21/3.
- 314 Clinic. Laboratory 6 hours. Credit 2.
- 317 Therapeutics. Class 3 hours. Credit 3.
- 319 Soundness. Laboratory 2 hours. Credit 3/3.

A knowledge of the special phases of soundness from a legal standpoint is of the greatest value to a veterinarian. He should be able to advise his clients regarding the significance of weaknesses and blemishes, their probable transmissibility by breeding, etc. The hospital clinic furnishes abundant material to make this a thorough course of study.

321 Restraint. Laboratory 2 hours. Credit 3/3.

The student is taught how to confine animals for various surgical operations and manipulations. The hospital is equipped with operating tables, stocks and casting harness for all surgical work.

401 Theory and Practice. Class 4 hours. Credit 4. Prerequisite: 301-302.

## 402 Theory and Practice. Class 4 hours. Credit 4.

Prerequisite: Vet. Med. 301-302 and 311.

Four hundred and one and 402 deal with the different phases of infectious diseases, their diagnosis and control.

Texts for all courses are the same.

Text: Pathology and Therapeutics of the Diseases of Domesticated Animals, Hutyra and Marek.

Reference: Law, Hoare, Friedeberger and Frohner.

## 403 Surgery. Class 3 hours. Credit 3.

## 404 Special Surgery. Class 2 hours. Credit 2.

These courses are a continuation of the work of the previous year, and include all of the major operations.

Text: Veterinary Surgery, Merilatt, Vols. I, II, III, IV.

Reference: Share, Jones, Cadiot and Adams.

#### 405 Dentistry. Class 1 hours. Credit 1.

A study of the teeth of the domestic animals by aid of bones and models, and a consideration of the cause of their defects, prevention and treatment of same.

# 406 Milk and Dairy Inspection. Class 1 hour, laboratory 2 hours. Credit 1%.

In this course, classwork includes a study of the secretion of milk, its chemical properties and bacteriology; transmission of diseases of man by milk; methods of handling milk from the cow to the consumer, and methods of herd and dairy farm inspection. The laboratory work includes the more important physical and chemical bacteriological and microscopic milk tests.

Text:

Reference:

# 408 Laboratory Diagnosis. Laboratory 2 hours. Credit 3/3.

This course will include practice in the ordinary diagnostic methods with which the veterinarian should be familiar. Special attention will be given to the diagnosis of parasitic troubles and bacterial infections. Some work in urine and milk analysis will be given.

# 410 Meat Inspection. Class 3 hours. Credit 3.

Meat inspection takes up a review of postmortem symptoms of different diseases of food producing animals, especially those transmissible to man. The subject is of especial importance to students who contemplate entering the Government work of inspecting meat products after graduation. Side trips are taken to the packing houses where the work of inspecting meat products is in operation.

Text: Meat Hygiene, Mohler and Eichorn.

## 411 Obstetrics. Class 3 hours. Credit 3.

After a brief review of obstetrical anatomy, the work is devoted largely to a consideration of the different abnormal conditions arising incident to parturition and the treatment.

Text: Veterinary Obstetrics, Williams.

412 Lameness and Shoeing. Class 2 hours, laboratory 4 hours. Credit  $3\frac{1}{2}$ 3.

Diseases of the foot and the effect of shoeing on their prevention and treatment. The instruction is of especial importance to the city practitioner.

Text: Horseshoeing, Adams; Diseases of the Foot, Reeks.

414 Clinic. Laboratory 6 hours. Credit 2.

No school of medicine is stronger than its clinic. Here the student comes in actual contact with the problems relating to the care of sick animals. Hospital accommodations are furnished, and squads of students are assigned patients as they are presented. This work tends to impress upon the student the practical phase of his previous training.

415 Clinic. Laboratory 7 hours. Credit 21/3.

416 Jurisprudence. Class 1 hour. Credit 1.

There are certain restrictions placed on the movements of livestock from one State or country to another by the United States and State livestock sanitary commissions. Many other legal and ethical obligations are presented in the practice of the veterinarian. That he may deal intelligently with these matters, an attempt is made to outline them and their correct solution. In addition some of the fundamentals of business are outlined in the series of lectures given by different members of the Faculty of the School of Veterinary Medicine.

# Description of Subjects Taught in the School of Agriculture

The following subjects are given to students in agriculture in order that they may become familiar with some of the more common diseases that every stock owner must treat:

309 Veterinary Anatomy. Class 2 hours, laboratory 2 hours. Credit  $2\frac{2}{3}$ .

A study of some of the practical points of the anatomy of domesticated animals.

310 Animal Diseases. Class 2 hours, laboratory 2 hours. Credit 23/3.

The more common diseases of livestock are discussed in this course. The laboratory work is intended to teach the student simple operations and familiarize him with practical means of restraining animals for operative purposes. Hygiene and the disposal of animals dead of infectious diseases is brought out and special emphasis is placed on the administration of vaccines, uses of antiseptics, etc.

# THE SECONDARY SCHOOL

S. A. MARONEY, Professor and Principal J. H. CALDWELL, Assistant Professor J. O. MUNCIE, Instructor CAROLYN ISABEL BABB, Assistant HELEN LUCRETIA MOCDY, Assistant LAURA WRIGHT JOHNSON, Assistant FRED MCCARREL, Assistant J. W. BRIDGES, Assistant (College Departments)

This course contains the standard requirements for college entrance and a number of high school electives. It provides for foundational work, and at the same time allows the student to choose a number of practical branches according to taste and purposes.

The requirements for a first grade two-year State certificate are met by including the prescribed one year in education, domestic science and agriculture.

While other work is being carried, two lessons per week in piano, voice, violin or wind instruments may be taken, for which a nominal charge is made for use of instrument. Students in the department have full privileges as to College library, Dormitories, laboratories, shops and many College activities as well as the free services of the official College physician. No tuition is charged for any courses. Male students must take military training. Physical education is required of both boys and girls. Credit of one-half of hours is allowed for military and physical training. Military training may be dropped when total hours for College is finished or continued voluntarily.

Recitation periods are fifty minutes long. Penmanship and spelling must be taken if student is not proficient. Credit examinations are given in all branches. Grades brought from approved high schools are accepted.

Full Freshman standing in College is obtained upon completion of 15 units (conditional with 14 units), which must include first three years as formulated unless a greater part of such units consist of credits accepted from other high schools. Besides required branches, the complement of units comprises such subjects as will strengthen the student for the College course in view or for teacher's certificate requirements. A number of trades practice courses are offered to fill out the 15 units. Many new trades courses, or short courses in engineering are being formed.

The course is so administered that it can be completed in from three to four years, according to amount of extra work which stronger and mature students are permitted to carry. The time required to complete it may also be shortened by grades accepted from high schools, by passing credit examinations, and by attendance during Summer Sessions.

Entrance to the Secondary School requires: First, that applicant be 16 years of age, if residing where a four-year high school is maintained, or 14 years of age if no such high school is maintained at his home. Second, that a diploma of graduation, or certificate of promotion from the common schools of the State be presented or that applicant pass an examination in reading, spelling, penmanship, geography, United States history, grammar and arithmetic, as prescribed by law. Maturity and capacity of the student to do the work are given due weight.

## CURRICULUM OF SECONDARY SCHOOL

FIRST YEAR

FIRST SEMESTER	D.	SECOND SEMESTER	D.
Cl.  English 11	(2) (4) (4) (2) (3) (3) (2) (2) (1)	English 12 5 Algebra 12 5 Arithmetic 12 5 Woodwork 12 (Boys)   Mechanical Drawing 12 (Boys)   D. A. 12 (Basketry) (Girls)   Freehand Drawing 12   Military (Boys)   Physical Education 12   Spelling 12   Penmanship 12	(4) (2) (4) (4) (3) (3) (2) (2)
S	ECOND	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
CI. English 21 4 Plane Geometry 21 5 Ancient History 21 5 Woodwork 21 and	Pr. (4)	English 22 Cl. Plane Geometry 22 5 Modern History 22 5 Woodwork 22 5	Pr. (4)
Mechanical Drawing 21	(2)	Forge 22 (Boys)	(4)
or Farm Structures 21  Or D. A. 21 Sewing (Girls)  Vocal Music (Teachers)	(4) (1) (3) (3)	Or D. A. 22, Sewing (Girls) Vocal Music 22 (Teachers) 1 Physical Education 22 Military (Roys)	(4) (1) (3) (3)
	THIRD	YEAR	
FIRST SEMESTER		SECOND SEMESTER	
Cl.	Pr.	Cl.	Pr.
English 31 4 Physics 31 3 American History 31 4 Agriculture 31 2	(4) (4)	Cl.   Cl.   4	(4) (4)
or Lat., Ger., Fr., Span. 31		Cor Lat., Ger., Fr., Span. 32 4 Solid Geometry 32 4	
D. S. 31 (Foods) 1 Physical Education 31 Military (Boys)	(4) (3) (3)	D. S. 32 (Foods) 1 Algebra 34 (Engineers) 4 Physical Education 32 Military (Boys)	(4) (3) (3)
F(	OURTH		
FIRST SEMESTER		SECOND SEMESTER	
Cl. Lat., Ger., Fr., Span. 101 4	Pr.	Cl. Lat., Ger., Fr., Span. 102 4	Pr.
or Education 1012		or Education 102 2	
Education 201	(1)	Education 202	(4)
ELECTIVES TO MAKE 15 UNITS	_	ELECTIVES TO MAKE 15 UNITS	-
Language 31, 101	Pr.	Language 32, 102 Cl. Woodwork 22 Mechanical Drawing 22 Basketry 12 Solid Geometry 32	Pr. (4) (2)
Farm Structures 21 Woodwork 21 Typewriting Shorthand, etc	(4) (4)	Basketry 12 4 Solid Geometry 32 4 Forge 22 Typewriting Shorthand, etc	(4)
Public School Music 2 Physical Education 41 Military (Boys)	(3) (3)	Shorthand, etc	(3) (3)

# SUBJECTS

## English 11, 12. Class 5 hours.

First year book for composition theory and grammar. Writing two themes a week for individual correction and revision. Two to three classics each semester. Spelling and penmanship must be taken separately if lacking.

#### English 21, 22. Class 4 hours.

Composition, theory and practice. Three or more classics each semester. Oral interpretations.

#### English 31, 32. Class 4 hours.

Eng. 32 comprises classics and composition; Eng. 31 is good course in English grammar. Some classics and composition.

## Algebra 11, 12. Class 5 hours.

The solution of practical problems included in the aim. Pure algebra as foundation mastered thoroughly. Graphic method in equations stressed. Through quadratics and review.

Text: First Principles of Algebra, Revised, Slaught and Lennes.

#### Algebra 31. Class 3 hours.

Requires Algebra 11, 12. Text: Same as for 11 and 12. Alternate with D. S. 31 (Foods).

#### Algebra 34. Class 4 hours.

Continuation of Algebra 31. Required of engineers only. May be elective for fourth year.

# Physiology 11. Class 3 hours, laboratory 2 hours.

After physiology in common school. Taught by Science Department of College, with equipment of charts, models and apparatus. One aim is training in laboratory methods and note taking and scientific attitude. Lays foundation for later work in science. Gives grade on teacher's certificate.

Text: Advanced Physiology, Conn and Buddington.

## Arithmetic 12. Class 5 hours.

Common operations. Principles rather than short-cut calculations. The student's language and mental method looked after. Use made of equation.

Required of all students.

Text: Complete Arithmetic, Wentworth and Smith.

## Freehand Drawing.

Courses 11 and 12 are 4 hours each.

Woodwork, or Manual Training. Shop 4 hours.

Course 11 required of boys and girls. Girls may take D. A. (basketry) 12 instead of Woodwork 12. Mechanical Drawing 2 hours, required with Woodwork 11 and may be taken with 12. Course 21 is mostly turning; 22 is cabinetmaking. When personal proficiency is acquired, many useful articles for the home are made. Courses 11, 12, 21, 22 fulfill the manual training requirements for teacher's certificate course of two years.

See Manual Training course, College.

#### Mechanical Drawing 11, 12. Class 2 hours each.

Reinforcement of courses in woodwork taken at the same time. Closely correlated with it and taught by Manual Training Department.

#### Domestic Art 12 (Basketry). Class 4 hours.

Basketry, cord, rafia and reed work. Articles made are adapted for teaching handwork in the grades.

## Domestic Art 21, 22 (Sewing). Class 4 hours.

Plain stitches applied to various articles as towels, sewing aprons, etc. Patching and darning. Machine sewing. Seams. Simple undergarments. Study of textiles and fibers used.

## Plane Geometry 21, 22. Class 5 hours.

After Algebra 12.

Text: Plane Geometry, Stone and Millis. Parts I and II for courses 21 and 22, respectively.

## Ancient History 21. Class 5 hours.

First half of a year's survey of whole field of history. Oriental, Egyptian, Grecian, Roman and Medieval Europe to 1789. Making of historical maps and notebooks required.

Text: Outlines of European History, Part I, Robinson and Breasted.

## Modern History 22. Class 5 hours.

Continuation of 21. From beginning of French Revolution to date. Completes a year of general history which is accepted on a teacher's certificate. Maps and notes.

Text: Outline of European History, Part II, Robinson and Beard.

# Farm Structures and Equipment. Practicum 4 hours.

Course considers briefly the suitable machines, structures and materials adapted to the various types of farming. Farm water supply. Sanitation. Labor-saving devices. Fencing. Drawing of plans for farm buildings.

# Forge 22. Shop 4 hours.

First work in blacksmithing. Iron and steel. Drawing, upsetting, welding and tempering.

## Vocal Music. 2 hours.

Courses 21, 22, 31, 32, the series covering two years. Essential work for teachers. Twenty-one and 22 are prerequisite for public school music.

# Physics 31 (Elementary). Class 3 hours, laboratory 4 hours.

Required in all courses.

Prerequisite: Alg. 11, 12, Plane Geom. 21, 22.

Covers in an elementary way the principles of mechanics and heat.

Text: Essentials of Physics, Hoadly.

Physics 32 (Elementary). Class 3 hours, laboratory 4 hours.

Required in all courses.

Prerequisite: Phy. 31.

A continuation of course 31. A study of magnetism, electricity, sound and light.

## Oklahoma History and Civics 41. Class 1 hour. Practicum 1 hour.

The unique story of Indian consolidation and settlement of Indian Territory and Oklahoma. One hour devoted to current State affairs. Survey of State in education, industry and government. Many maps and supplementary matter used.

Required for State life certificate.

## American History 31. Class 4 hours.

High school history. Gives grade on teacher's certificate.

#### American Government 32. Class 4 hours.

Prepares to teach in common schools. Pedagogy of subject given. Course composed of two parts, how the government operates and how it is organized.

#### German 31, 32.

Mastery of inflections and of the elements of syntax. Reading of easy narrative prose. Written and oral translations from English to German. Conversation.

Text: German Grammar, Paul V. Bacon; German Life, Philip S. Allen.

## Latin 21, 22.

Drill on the essentials of Latin grammar, acquiring of vocabulary, reading stories from Roman history, anecdotes and fables.

Text: Latin Lessons, Smith.

## French 31, 32.

Essentials of French grammar, with the more common irregular verbs. Reading of about one hundred pages of easy prose. Careful training in pronunciation.

Text: Nouveau Cours Français, Fontaine; Contes et Legendes, Guerber; French Reader, Aldrich and Foster.

## Spanish 31, 32.

A practical and thorough course conforming to the most advanced methods of teaching; careful treatment of pronunciation. The student realizes that he is learning a living language.

Text: A Spanish Grammar, Coester; Elementary Spanish Reader, Harrison.

(For courses 101 and 102 in second year of language, see College.)

# Botany 22. Class 3 hours, laboratory 4 hours.

Elementary. A study of plant forms, mainly the higher, together with the more important plant activities. Living material is used as much as possible in order that the student may gain first-hand information. Latter part of semester devoted to cells and cellular structures. One or more types from each large plant group.

Text: Bergen and Davis.

Physical Education (Men). Class 3 hours. Three years' credit given

and required.

Course 11. Free exercises, games, athletic dancing and mass class drills. A portion of each class period is devoted to talks on exercises, diet, rest, work and importance of correct hygienic habits. Course 12. Elementary apparatus, work on buck and mats, out-of-door basketball, and track and field work. Hygienic talks.

Course 21. Mass drills with and without hand apparatus. Elementary work on horse and parallels. Rhythmic exercises and mat work. Hygienic talks.

Course 22. Mass drills with hand apparatus; more advanced work on horse and parallels; games, track and field work. Hygienic talks.

Course 31. Mass drills. Elementary work on horizontal bar and

flying rings, with systematic graded work on the horse and parallels. Hygienic talks.

Course 32. Mass drills. Intermediate graded exercises on all apparatus. Tumbling. Athletic dances and games. Track and field work. Introductory lectures on physical education.

Physical Education (Women). Class 3 hours.

Courses 11, 12, 21, 22, 31, 32, required.

Calisthenics and gymnastics. Aims to give thorough work in graded gymnastics by means of free exercises with and without hand apparatus. Elementary folk play. Games and marching. Handled by College Department of Physical Education for Women.

Military.

Three times a week. Counts one-half of hours in estimate for College entrance. Military science instruction given and cadet drill. Cadets in the band do not drill, Geography 42. Class 3 hours.

High school geography. Answers purposes of teachers for com-

mon schools.

Domestic Science 31, 32 (Foods). Class 1 hour, laboratory 4 hours.

A popular, practical course in cooking and its materials to meet the needs of public school teachers, housewives and students in any course who desire to take it. Does not require chemistry as a prerequisite. Grade applies on teacher's certificate.

Agriculture 31, 32 (Crop Production). Class 2 hours, laboratory 4 hours.

A general course which deals with the fundamental principles underlying the production of crops. Special attention is given those crops of most importance in the State. Selection of seed, seed testing and grading, cultural methods, and the general management of the crops are taken up. Rotations, green manures and commercial fertilizers, together with their relation to the maintenance of soil fertility are discussed. The most important insect enemies and discussed of the common crops and methods of their control are considered.

Required for teachers' certificates.

101 Psychology.

201 History of Education.

102 Principles of Education.

202 Methods and Management.

These constitute the required one year in pedagogy for two-year State certificate. For description, see School of Education in College.

# OTHER DEPARTMENTS

#### DEPARTMENT OF MUSIC

BOHUMIL MAKOVSKY, Director
Instructor in Wind Instruments and Band Conductor
JANE PORTER SLOSS, Instructor in Piano
MARY EDITH WHARTON, Instructor in Voice
EDITH E. BRATTON, Instructor in Violin
KATE VERMILLION, Assistant in Piano
RUTH ANN PARKS, Assistant in Piano
AMSA McDowell, Student Assistant in Wind Instruments

#### Courses in Music

		Hrs.	Pr.	Cr
1	Piano	1		1
2	Voice	1		1
3	Violin	1		ī
	Wind or Band Instruments	î		î
	Public School Music	2		2
	Music Theory or Harmony	~	2	2-3
	Choral Practice		2	2-3
	Band or Orchestra, Junior or Senior		2	2-3
			4	2-3
Students	should register by numbers.			

Music makes broad claims upon the attention of students because of its generally recognized educational value, its cultural influence on the home life of the people, and its professional claims upon the more talented students of music. The instruction in this department tends toward the musical education and training of a large portion of the student body.

Accomplished musicians are always in demand as directors, singers, teachers, accompanists and organists for church, concert and public school music work. The Music Department offers earnest students the opportunity to acquire scholarly musicianship.

As a matter of College policy, students will not be allowed to undertake music to the exclusion of other subjects, since it is the purpose of the College to distribute these studies to the greatest possible number of students attending this institution, without offering university or conservatory courses therein. Students may take ony one course in music during any term.

The following courses enable the student to obtain a comprehensive and practical knowledge of music and to acquire skill and

power in interpretation. The time required for completing a course will depend upon previous preparation, the talent, ability and character of the work of each student, but all have the privilege of advancing as rapidly as is consistent with good work.

#### COURSES IN VOICE CULTURE

Elementary. Two lessons per week.

Prerequisite: One year's work in piano or sight-reading.

Exercises are given for deep breathing and breath control; for purity of production, freedom of action and blending of the registers, correct attack and resonance, pure vowel production and distinct articulation.

Intermediate. Two lessons per week.

This course gives great attention to tone placing, elements of style and phrasing, stacatto, legato and portamento delivery, and exercises tending to the greater flexibility of the voice. Songs of medium grade freely used.

Advanced. Two lessons per week.

This course is devoted to a study of tone color, agility, and all musical ornaments—trill, turn and gruppetta, appogiatura, acciaccatura, mordente—mezza-di-voce, phrasing and style, and advanced teaching by means of difficult exercises and songs, recitatives and arias from opera and oratorio.

All students in the elementary voice class are urged to attend the sight-reading class unless excused by the Director. Attendance at all recitals is required of every student. When requested, students in any grade must sing in recital and from memory.

#### COURSE IN PUBLIC SCHOOL MUSIC METHODS

Credit for work in this subject at some college or State Normal School will be given, but such credit should be claimed before entering the Senior year.

This course is carefully classified for each of the grades in the public schools, the work being outlined to develop the vocal ability and musical education of the pupils to suit the particular condition of the mind and the voice of the child at the average age in each grade. Advanced work is given for those desiring special preparation. This outline is somewhat as follows:

Rote songs for little folks. Study of "staff", "notes", "scale". Location of "do", or the keynote, in nine different keys. Sight-reading and singing, by syllable and by letter. Much attention given to tone quality and rhythm. Complete analysis of songs—as to key signature, meter signature, tempo signs, marks of expression, the different values of notes used, etc. Written work from oral dictation of tones, syllables or letters. Written work from dictation of rhythm. Transposition of songs into different keys. Special practice in music class conducting. Singing at sight, rounds, and two, three and four-

part songs. Thorough practice writing and singing major, minor and chromatic scales. "Spelling" and "pronouncing" different triads or chords. A little study of the elements of harmony.

#### PIANO COURSE

#### Elementary.

Exercises for position and development of the finger, hand and arm muscles. Scales, chords and arpeggios in simple forms. Studies by Burgmuller, Concone and others. Easy pieces and sonatinas.

#### Intermediate.

Major and minor scales and arpeggios. Suitable technical exercises. Selections from Czerny, Op. 299 and 740. Octave studies by Wilson G. Smith, Williams, Low, etc. Heller Studies, Op. 47, 46, 45. Mendelssohn's Songs Without Words. Bach, two-part inventions. Sonatas by Haydn, Mozart and Beethoven. Pieces by Spindler, Godard, Lack, Grieg, Schumann, Chaminade, Nevin, etc.

#### Advanced.

A systematic study of the scales and arpeggios in all forms. Suitable technical exercises. Czerny, Op. 740; Cramer-Bulow Studies, etc. Octave studies by Kullack, Phillip and others. Bach Three-Part Inventions and Well Tempered Clavichord. Beethoven sonatas. Chopin preludes, etudes, nocturnes, waltzes and polonaises. Pieces by Schubert, Schumann, Moskowski, Tschaikowsky, Poldini, MacDowell and other modern composers.

#### THEORY

The course comprises the study of the following: Musical rhythm, tempo marks, accents, abbreviations and signs, natural and artificial groupings, musical embellishments, scales, intervals, chords and cadences.

#### HARMONY

Classes in harmony will be offered to students having a year's credit in theory.

#### VIOLIN COURSE

#### Elementary.

Careful attention given to proper position of holding the violin and bow. Elementary violin lessons from modern methods. Scales and chords from first to third positions. Studies by Wohlfahrt, Sitt, Sevcik, Meertz and Kayser, etc. Pieces and ensemble.

#### Intermediate.

Major and minor scales in all positions. Studies by Mazas, Alard, Sevcik and Kreutzer. Pieces by Leonard, Weiniawski, Vieuxtemps, etc. Sonatas by Corelli, Tartini, Handel, Mozart and Beethoven. Easy concertos by modern composers. Sight-playing, orchestra, string quartet.

#### Advanced.

Technique by Sevcik, studies by Kreutzer, Fiorillo, Rode. Concertos by Viotti, Rode, Kreutzer, Burch, Saint-Saens, etc. Orchestra, ensemble, string quartet, class.

## Viola, Violoncello and Contrabass Course.

These instruments may be studied by similar grades to those in the violin course, or may be carried only up into the Intermediate Grade. Pupils having reached a fair degree of proficiency on any stringed instrument are required to play in the regular College orchestra.

#### COURSE IN WIND INSTRUMENTS

Students wishing to take lessons on any wind instruments receive two lessons per week on instruments.

## Methods Used.

For Clarinets—Lazarus, H.; Kroepsch, F.; and Baermann's. For Oboe.—Rosenthal, R., Practical Method.

For Bassoon.-Satzenhofer, J. A., Practical Method.

For Saxophone.—The Universal Method.
For Cornet, Horn and Baritone, Treble Clef.—Arban's Method. For Baritone (euphonium), three or four or five valves in Bass Clef.—Universal Method.

For Trombone-V. Cornette's Method.

For Bass.—Pares, G., Daily Technical Exercises. Complete course in scale studies, and Pandert, E., Etudes.

#### The Band.

Instruction will be given by regular College band leader in the use of brass and wood-wind instruments. To become a member of the College band the student must pass a satisfactory examination before the Director as to knowledge of music and ability to perform on certain instruments before securing recommendation to the President for transfer to the band. The members are required to attend practice three times per week and to perform in public by authority of the President. There is no charge for instruction in the band. The College furnishes most of the instruments, music and music stands to members of band and orchestra. Other students pay \$1.00 per month in advance for instruments used in practice when furnished by the College.

#### The Orchestra.

Any College student who plays on any string or wind instrument has the privilege of the orchestra on approval by the Director of Music.

## DEPARTMENT OF PHYSICAL TRAINING FOR MEN

Much of the success of a young man or woman in college and in life after graduation depends on good health. The Oklahoma A. and M. College believes in the old adage, "A sound mind in a sound body". The Department of Physical Training aims to create and maintain a vigorous state of health in every student in the College, and its work is so diversified that it meets the individual needs. It strives to keep the student body in the best possible physical condition, for and during their college course, and to lay the foundation for proper living and care of the body.

The Men's Gymnasium is a large, well-lighted room 40x60 feet and contains all of the necessary apparatus for gymnasium work of all kinds. The outfitting is done with the idea of giving the student advantages to be found in any well regulated college gymnasium. Dumbbells, barbells and Indian clubs will be found there for mass class drills, and of the heavier apparatus there are the flying rings and traveling rings, the horse, the horizontal bar, the parallel bars, mats, jumping standards, etc. Boxing gloves and fencing foils are also supplied to those desiring to enter into this special work.

In direct connection with the gymnasium is a large locker room with 600 steel and wooden lockers, benches, and a well equipped shower room with eight showers for hot and cold baths.

Every student in the College is expected to do some work to keep himself in the best physical condition.

Students of the Secondary School and Freshman classes, Business and Short Courses are required to do a certain amount of work, for which they receive credit necessary for graduation. There are also classes organized for the other students of the College.

An athletic field for football, baseball and track and field athletics is provided by the College and maintained by the Athletic Association. Students are encouraged to take part in athletic and out-of-door sports. College and class teams are organized and maintained by the Athletic Association, and each team is under the supervision of a trained instructor.

Athletics are a part of the physical training work, but whether a student participates in them or not is optional. No student is allowed to become a member of a team until he has been examined by the Director and proven that he is physically fit. A high standard of scholarship is also required of all members of the College teams.

Each student in the Men's department must provide himself with a gymnasium suit so that there can be a complete change of

clothing after the physical training work. This suit consists of a black, sleeveless jersey, black running trousers and soft-soled shoes. These can be procured at a local store at a cost of not to exceed \$2.50.

## SUBJECTS

#### COURSES FOR MEN

# Physical Examination-Preliminary

A thorough physical examination is required of all entering students. This examination consists of measurements, strength tests, examination of the eyes, ears, nose, throat, lungs, heart and other vital organs, and special stress is laid upon physical deformities and inequalities. These defects are pointed out to the student and exercises to correct them are prescribed. Where necessary, special attention and advice are given to the student. An examination is taken at the beginning and at the end of the first year, and at the end of each year after that.

A gymnasium handbook containing chapters on personal hygiene. diet, exercise, prescription, injuries and an anthropometric table is given to each student, who is required to plat his measurements and, upon completion of the gymnasium course, the book becomes his

property.

#### FRESHMEN

# 101 Physical Training (first semester).

Required of the Freshmen of the College. The work of the Freshman class in this course consists of games, athletic dancing, boxing, wrestling and mass drills, with and without hand apparatus. Graded, systematic work on all apparatus, tumbling and indoor track work. Part of the work will consist of lectures on physical educational subjects. Three times a week. Credit given. Required for graduation.

# 102 Physical Training (second semester).

Required of the Freshmen of the College. Advanced work on apparatus, tumbling, athletic dancing, games and drills. The latter portion of the semester will be devoted exclusively to work out of doors, with emphasis on track and field athletics. Lectures on physical educational subjects. Three times a week. Credit given. Required for graduation.

# 403 Physical Training (first semester).

Senior and Junior elective.

A course in the theory of coaching the four major sports of college athletics. This work includes football and basketball.

Two hours each week.

# 404 Physical Training (second semester).

Continuation of Course 403. This semester's work includes baseball and track and field athletics.

Two hours each week.

No student admitted to this course without the consent of the Physical Director.

#### FOR BUSINESS STUDENTS

## 501 Physical Training (first semester).

Required of students in the business class.

Similar to Course 101, but less advanced. Mass drills in class and apparatus work of the heavier type. Games, mat exercises and lectures on physical education. Three times a week. Credit given. Required.

## 502 Physical Training (second semester).

Continuation of the work begun in Course 501, with basketball and track and field work in the spring. Lectures on physical education. Three times a week. Credit given. Required for graduation.

#### SHORT COURSE STUDENTS IN AGRICULTURE

## 601 Physical Training.

Required of students in the Short Course in Practical Agriculture. Work in mass formation and on apparatus, with an emphasis on coordination. Lectures on personal hygiene and first aid. Three times a week.

#### PREPARATORY STUDENTS

## 11, 12, 21, 22, 31, 32 Physical Training.

Complete courses given under the Secondary School.

#### OPEN TO ALL STUDENTS

# 701-702 Physical Training.

- A. Cross-country running during the fall and spring. Those students desiring to do so may substitute a certain amount of cross-country running for the regular gymnasium work.
- B. Wrestling.—A class in wrestling, in which all of the holds, breaks and counters are given, is formed. A student may substitute one hour's work a week in wrestling for one hour of his regular gymnasium work. One hour per week.
- C. Boxing.—Class in boxing, in which all of the blows, parries, guards and counters are given, is formed. Students may substitute one hour's work in boxing for one hour of regular gymnasium work. One hour per week.
- D. Class in Fencing.—Open only to upperclassmen, with the consent of the Director.
- E. Special Class.—A special class is formed for those who, on account of deformities, are unable to take the regular work of the department. The work of this class is suited to the needs of the individuals.
- F. Individual corrective work for all students who show in their examination the need of such work. The idea of this work is to correct deformities so that the student may get the maximum value from the regular class work.
- G. A class is organized and maintained for Sophomore, Junior and Senior students. Meets twice a week. This work is optional with the students.

H. Advanced Gymnastic Class.—Open to all students. A special class is formed for students who desire to do advanced work on the horse, parallel bars, horizontal bar, flying rings, mats, tumbling and clubswinging. This comprises the regular gymnasium team for exhibition purposes. Three hours per week.

#### ATHLETICS

Teams are now maintained in football, baseball, basketball, track and field athletics, tennis, wrestling, gymnastic work. The above forms of athletics are now recognized by the Southwest Conference, and the College gives letters to those complying with the requirements.

## DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

ANNA MILLER, Professor MARGARET UNSER, Assistant

The gymnasium for women, located in the Woman's Building, is an unobstructed room 32x63 feet, and is equipped with all of the modern gymnasium apparatus. There is a locker and dressing room in connection, supplied with a large number of steel lockers. There are also shower baths. In the rear of the building are the women's outdoor tennis courts.

A regular costume is required. In order that these may be uniform in pattern and color, they are ordered by the College. The cost of the suit, including shoes, is about \$6.00.

At the beginning of the first semester each young woman is given a careful examination. Personal history, measurements, deformities, are taken and recorded, with an examination of the vital organs. This examination is repeated during the second semester and comparison made at both examinations with the average. Suggestions and prescriptions suited to the needs of the individual are based upon this examination.

Physical training is prescribed for all Freshman, Sophomore and Business girls, including special students, throughout the College year, three periods a week.

The prescribed courses are designed to secure a high degree of organic power, harmonious physical development, and a reasonable degree of skill and grace.

## **SUBJECTS**

## 101-102. Three hours per week.

Required of members of the Freshman class and Business class.

The work of these classes consists of floorwork, emphasizing carriage and coordination of muscles. Movements with apparatus, progressive back and abdominal exercises are given. Plays, games, rhythms and folk dancing form an important feature of the work.

#### 103-104.

Required of members of the Sophomore class.

This course consists largely of folk and national dances emphasizing the characteristics of the various dances with relation to their respective nations. Folk games and plays, exercises of balance and muscular tension, and rhythms form an important part of the work.

## 105-106-107-108.

Optional and elective for Junior and Senior girls in the Schools of Science and Literature, Education and Home Economics.

# A Plays and Games (first semester). Credit 1.

In this course the theory of plays and games will be studied. It is also the purpose to provide explanation of and practice in a considerable number and variety of the playground games; dramatic games; traditional games and song plays; games of imitation, gesture, choosing and catching; games which appeal to the young by the stirring energy of their movement and their imaginative pantomime. Studies are made of children's games from all parts of the world, and of the simplest dances of primitive people and of the folk of Europe, or

# Advanced Folk Dancing (first semester). Credit 1.

This course consists of the more advanced folk and national dances and ring games suitable for school festivals and pageants. Festivals and pageants are taken up, the elements in each discussed, and outline for each suggested. Some time also is devoted to pantomime, its value and possibilities.

# B Theory of Physical Education (second semester). Credit 1.

This is a continuation of the plays and games, but the following will also be considered: History and development of physical education; growth and development of the child; personal hygiene; how to observe and criticise the work of pupils, and plan and arrange lessons. This course will also include methods and exercises used for corrective and therapeutic purposes. A general treatment of massage is given. In specific cases, insufficient osseous development, fractures, dislocations, sprains, muscular rheumatism, colds, insufficient respiratory power and neuralgic headache are considered. Or

# Advanced Folk Dancing (second semester). Credit 1.

This is a continuation of the first semester's work. The history of dancing is more thoroughly studied, from the primitive dances to those of the Seventeenth and Eighteenth centuries. The relation of music to dancing is taken up and a simple system of rhythm is added.

# 101 Personal Hygiene. Credit 1.

This course considers health in its social and economic aspects and presents personal hygiene as the study by means of which health and efficiency are improved and conserved; facts and principles relating to the body's construction and function which may strengthen the argument in favor of hygienic living; improvement of health and prevention of diseases.

# Corrective Gymnastics.

For those unable to take the work of the regular required courses this course will be substituted. Hours to suit.

## Athletics.

A. Basketball.—Each class has a basketball team, and an interclass schedule is played.

B. Baseball, Volleyball, Field hockey and Cross-Country Walking.—Open to all classes during the months of October, April and May.

C. Tennis.—Tennis is played on the College courts during favorable weather. A tennis club is formed which is under the direction of the Girls' Athletic Association. The club is open to all girls of the College. The dues are 50 cents per year.

D. The English Folk Dance Society.—This society, under the auspices of the Girls' Athletic Association, was formed to further the popularity of English folk dances and songs. Meetings are held once a month in the Girls' Gymnasium. It is the ambition of the society to become an authorized branch of the English Folk Dance Society of England.

E. May Festival Dances.—For the May Festival each year the Girls' Athletic Association gives a May pole dance, composed of the rhythmical plays and games taught in the gymnasium throughout the school year.

# DEPARTMENT OF MILITARY SCIENCE AND TACTICS

ARTHUR J. DAVIS
Captain of Infantry, United States Army
Professor of Military Science and Tactics
Commandant of Cadets
M. McDonald
Sergeant Major, United States Army, Retired
Assistant

This institution, being one of the beneficiaries of the Act of Congress of 1862, instruction in military tactics is made compulsory.

The department is in charge of an officer of the United States Army, detailed by the War Department, as professor of military science and tactics.

Military discipline is exercised with firmness, kindness and justice. It tends to cultivate habits of punctuality, alertness and the sense of personal responsibility. It also teaches attention to detail, cleanliness of person and of dress, a high sense of honor and respect for those in authority.

It helps the student to prepare himself the better for any po-

sition in life, because employers like to find men who are imbued with the idea of doing exactly as they are instructed by one who is authorized to direct them, and who have been trained to exercise quick yet sound judgment in any emergency that arises concerning which they have no definite instruction. These qualities are thoroughly inculcated in any person by a military training, such as the College endeavors to give them. In addition, the drills give a graceful carriage to the student, assist in the promotion of the health of the individual, and are an added benefit to the gymnasium work of the College.

Former President Taft, on February 25, 1911, following a review of 1,400 cadets of the University of Illinois, wrote as follows to the President of that institution: "We are all in favor of college athletics, but one of the defects of athletics is the tendency to confine work to those who are naturally best adapted to it, while the great student body takes no active part in the games. This is not true of military training that comes from the organization and maintenance of a school regiment."

The course of instruction is made to conform strictly to the provisions of General Orders No. 70, War Department, series of 1913, and General Orders No. 49, War Department, series of 1916. In compliance with the requirements of these orders the course is both practical and theoretical, and will be given as follows:

# Practical

1. Infantry Drill.

2. Advance Guards, Rear Guards, Outposts, Messages and Orders, Signalling.

3. Marches, Map Drawing and Entrenchments.

- 4. Ceremonies of Review, Inspection, Parades, Escort of the Colors, and Guard Mounting.
- 5. Gallery Practice, Nomenclature of the Rifle, Sighting Drills, Position and Aiming Drills, and Deflection and Elevation Correction Drills.
  - 6. Range Practice with Service Ammunition.
  - 7. Field Problems with Blank Ammunition.
- 8. Duties consistent with rank as cadet officers or noncommissioned officers in connection with the practical work and exercises.

All students not physically disqualified are required to take the practical instruction during the entire preparatory course and in the collegiate course until 180 hours have been completed. Hours drilled in the preparatory course count one-third.

During the first semester there will be three hours' drill per week, while the second semester will be devoted to two drills per week with one hour's instruction in military science in the subjects as set forth in the following table:

# Theoretical Military Science

- 1. Infantry Drill Regulations, United States Army, 1911.
- 2. Small Arms Firing Manual, 1913.
- 3. Field Service Regulations, United States Army, 1914.
- 4. Manual of Guard Duty.
- 5. Outlines of First Aid to the Injured.
- 6. Lectures on various military topics.

Satisfactory completion of the prescribed work is required before graduation.

Students entering the College from other institutions where officers of the Army are on duty will be given credit for the work for which they hold certificates.

Students who show aptitude for the military service are recommended for appointment as second lieutenants in the Army. Positions in the Engineer Corps of the Army are open to certain students of the Engineering Department of the College. A list of students who have shown special ability in engineering is kept by the War Department in order to be able to locate good engineers in case of need. Graduates of the College are also selected for service in the Philippine Constabulary and are not required to take the mental examination if recommended by the College authorities.

# Reserve Officers Training Corps

By giving the above course in military science this College is eligible and has been designated by the War Department to maintain a Senior Division of the Training Corps for Reserve Officers. The primary object of this advanced training is to prepare young men to perform intelligently the duties of commissioned officers of the military forces of the United States, and it

enables them to be thus trained with the least practicable interference with their civil careers.

When a student at this College has completed two years instruction in the Military Department and he has been chosen by the President and professor of military science and tactics for further instruction, he will receive pay at the rate of \$9.00 per month and his uniform will be furnished free by the United States Government.

In return for this the student must agree to take instruction of five hours per week during the remainder of his course and to pursue the camp training prescribed during such period by the Secretary of War. This camp training will not exceed two camps of four weeks each. Ordinarily one will be attended at the end of the Junior year and the other subsequent to graduation. In case the student prefers to attend a camp during his first two years in the collegiate course, he will be given full credit for such attendance.

The camp to be attended subsequent to graduation may be omitted in case the graduate applies for and receives the appointment of temporary second lieutenant in the Regular Army for a period of six months, with pay at \$100.00 per month and allowances.

At the conclusion of the camp subsequent to graduation, or when the graduate receives an appointment as temporary second lieutenant in the Regular Army, he may apply for and be appointed an officer in the Reserve Corps. Upon being appointed the graduate must agree to serve as a reserve officer for ten years, and he will attain the rank in the reserve corps according to his length of service in it. He cannot without his consent be called out for service in a lower grade than that held by him in the reserve corps, and whenever called into the service will receive the full pay and allowances of his grade. The minimum for a second lieutenant is \$1,700.00 per annum, with quarters, heat and light.

In time of peace he may be called into service for instruction with troops during field exercises for not to exceed fifteen days in any one calendar year. In time of actual or threatened hostilities, the reserve officers will be the first to receive commissions in the volunteers.

Under the advanced course are included the following subjects:

- 1. Military Organization. Property Accountability.
- 2. Service of Security and Information.
- 3. Personal Hygiene.
- 4. Camp Sanitation and Camping Expedients.
- 5. Military Sketching.
- 6. Studies in Minor Tactics.
- 7. Map Maneuvers.
- 8. Elements of International Law.

Lectures on International Relations of America, General Principles of Strategy, Psychology of War, Military History and Policy of the United States.

# Equipment

The War Department has supplied the College with 560 U. S. magazine rifles, cal. 30, model of 1898; 40 U. S. rifles, cal. 30, model of 1903; 18 U. S. magazine rifles, cal. 22, and 600 sets of infantry equipment. Swords, targets, target supplies, ammunition for all rifles and cleaning material are furnished to the College free of charge by the War Department.

Students, with the exception of those enrolled in the Reserve Officers Training Corps, are required to furnish themselves with the regulation uniform, which is modeled after the U. S. Army service uniform.

# Organization

All young men are required to enroll in the Military Department.

Those who are entitled to be excused must at the time they enroll make a written application to be placed on the unassigned list. All students who are on the unassigned list will be excused from all military duty.

The Corps of Cadets has been organized into a regiment consisting of a band and three battalions of three companies each.

## Honorable Mention

The best drilled companies of the regiment for the College year, 1915-16:

Company C.

J. A. Black
C. C. Sullivan
C. C. Sullivan
First Lieutenant
Fir

Captains Black and Hildebrand were presented with special sabers by the College as a reward for their excellent work in the Military Department during the College year, 1915-16.

Each year the names of all the company officers of the best drilled company and company letter are engraved on a silver band and placed on the staff of the College flag.

The beautiful Drummond cup will be awarded annually for individual excellence in the Military Department.

The commissioned officers, as a reward for excellent service, are presented by the College with an engraved commission and a saber upon graduation.

The officers receive pay from the College for their services.

## Rifle Club

The Rifle Club of the College is a part of the National Rifle Association of America. All firing is under the supervision of a judge selected by the N. R. A. Medals and qualification insignia are furnished by the War Department.

## Officers of the Club

President, G. L. Gloeckner. Captain, Claude Rouse. Secretary, E. L. Chase. Treasurer, Charles Titus.

# AGRICULTURAL EXPERIMENT STATION

The Experiment Station was established by provision of an Act of Congress approved March 2, 1887, commonly known as the Hatch Act, and entitled "An Act to establish Agricultural Experiment Stations in connection with Colleges established in the several States under the provision of an Act approved July 2, 1862, and of the acts supplementary thereto". Its objects are defined in the second section of the Act as follows:

"That it shall be the object and duty of said Experiment Stations to conduct original researches, or verify experiments on the physiology of plants and animals; the diseases to which they are severally subject, with the remedies for the same; the chemical composition of useful plants at their different stages of growth; the comparative advantages of rotative cropping as pursued in a varying series of crops; the capacity of new plants or trees for acclimation; the analysis of soils and water; the chemical composition of manures, natural or artificial, with experiments designed to test their comparative effects on crops of different kinds; the adaptation and value of grasses and forage plants; the composition and digestibility of different kinds of foods for domestic animals; the scientific and economic questions in the production of butter and cheese; and such researches or experiments bearing directly on the agricultural industry in the United States as may in each case be deemed advisable, having due regard to the varying conditions and needs of the respective States and Territories."

The Oklahoma Agricultural Experiment Station was located at the A. and M. College at Stillwater in July, 1891. In addition to the funds received from the two Federal appropriations above mentioned, which amounts to \$30,000.00 per annum, the State Board of Agriculture, as the Regents of the A. and M. College, has made liberal provision by appropriating funds from the legislative appropriations for the further maintenance and support of the Experiment Station.

The results obtained in the various lines of experiment work are published in bulletins. In addition to the regular bulletins, giving the results of this work, a series of popular publications known as circulars are issued from time to time as conditions would seem to warrant to be used by the extension service in distributing valuable information to the farmers.

A mailing list is maintained which numbers at the present about 17,000 names, principally of farmers, in various parts of

the State. Any citizen of the State interested in agriculture may have the bulletins and other publications from the Station sent free on application to the Director of the Experiment Station asking to have his name placed upon the regular mailing list.

Such portions of the College farm, which comprises about 1,000 acres, as are needed for Experiment Station and research work, are set aside for this purpose; also such livestock as is needed for feeding experiments is utilized by the Station men. All the scientific laboratories of the College are available for research work, and many of the scientific departments of the institution are interested in carrying on different projects under the supervision of the Experiment Station officers.

# EXTENSION DIVISION

The Extension Division of the A. and M. College embraces all of its activities for the instruction of people who are not resident at the College. All persons who are pursuing courses given at the College, covering more than two weeks, are considered residents. The A. and M. College is doing all that it can to extend its usefulness to all the people of the State as far as possible.

# Union of Federal and State Work

In July, 1914, the State Board of Agriculture, to comply with suggestions from the United States Department of Agriculture relative to meeting the requirements of the Smith-Lever Law, abolished the position of Dean of Extension work at the A. and M. College, and created the position of Director of Extension; and to further harmonize and make more effective the Agricultural Extension work being done in Oklahoma by the A. and M. College and Farmers Cooperative Demonstration Work, on July 25, 1914, the State Agent of the Farmers Cooperative Demonstration Work was elected to the position of Director of Extension of the A. and M. College. The past three years have demonstrated the wisdom of this union. It has spelled efficiency and economy.

GENERAL PLAN OF WORK.—The general plan of extension work contemplates first, a county agent in every county in the State working full time, and a county woman agent for women and girls work, working not less than nine or ten months per year.

The county agent will conduct Farm Demonstration Work, Farmers' Institutes, Boys Club work (Girls Club work where there is no woman agent), and have general charge in his county of the Agricultural Demonstration Work of the A. and M. College and the United States Department of Agriculture.

The woman agent will have special charge of demonstrations in domestic science and home economics, Girls Club work and

club work for women, and be the representative in her county of the A. and M. College and the United States Department of Agriculture in all lines of extension work for women and girls.

The county agents will be under the special supervision of district agents, who will visit them regularly and assist them in all matters pertaining to their duties.

Specialists from the College, the Experiment Station and the United States Department of Agriculture will assist the county agents under direction of the Extension Division.

SPECIALISTS.—Specialists have been secured from the Bureau of Animal Industry of the United States Department of Agriculture in Dairy work, Poultry Club work and Pig Club work. We also have specialists from the United States Department of Agriculture in Farm Management and in Marketing and Rural Organization work.

Boys and Girls Clubs.—For the crop year of 1917 there will be the following clubs: Corn, Grain Sorghum (Kafir, Milo and Feterita), Cotton, Peanut, Wheat, Three Crop (Crop Rotation), Pig, Calf, Poultry, Canning and Better Bread. Write the Extension Division for additional information.

The number of boys enrolled during 1916 was 8,803 and girls 6,286, making a total enrollment of 15,089 club members.

Movable Schools.—A corps of from three to five lecturers from the College will conduct a school for one week in each county for farmers, their families and others, somewhat along the line of the Farmers Institute plan. The points in the county and the time spent at each point, as well as all other local details, will be arranged by the local county agent.

AGRICULTURE FOR SCHOOLS.—As provided by special legislative enactment, the work of the Department of Agriculture for Schools will be conducted as heretofore. This work has to do with the teaching of agriculture and domestic science in the common schools of the State. Teachers and county superintendents of schools should avail themselves of the help and cooperation of this department.

FAIRS.—Special work will be done to encourage and help in the holding of community and county fairs, all leading up to exhibits of agricultural, livestock and home products at the State Fairs. A school at the State Fair will be held for club prizewinners. Several \$160.00 and \$100.00 scholarships in the A. and M. College, and numerous lesser prizes, will be awarded in the various club contests. Write for special information.

Some Results Accomplished in 1916.—Under the auspices of the agents of the Extension Division there were held 2,348 farmers meetings. The agents spoke on some phase of their work at 3,556 meetings, at which there was a total approximate attendance of 211,928 people. There was a total of 1,040 field meetings with a total approximate attendance of 15,369. In the performance of their duties the agents report making a total of 62,528 visits to demonstrators, cooperators, business men and club members. In doing this they traveled 142,390 miles by railroad, 120,530 miles by team, and 146,672 miles by other conveyance; making a total of 409,592 miles traveled. There were a total of 37,446 personal calls at their offices or homes, and 21,492 telephone calls.

During the year the county agents assisted in the treatment of 82,291 cattle for blackleg; 4,588 for anthrax; 3,196 for tuberculosis, and 1,539 for digestive and other troubles. Single treatment was given for hog cholera to 8,318 head of hogs and the simultaneous treatment to 60,705 head. There were 13,350 head of hogs treated for worms. Horses to the number of 254 were treated for distemper, 7 for menengitis, 78 for digestive ailments, 92 for accidents, and 200 for anthrax.

The agents have been very active in tick eradication work, cooperating always with State and Federal officials. They claim having influenced the building of 74 dipping vats; having helped in the construction of 25 of them; helped to fill with the solution 49, and tested the solution in 110. They report the building of 181 dipping vats in the State during the year 1916 by all forces. They estimate that during the year 628,229 cattle were dipped for blackleg.

Fifty-two of the agents have instruments of their own for the vaccination of hogs and cattle.

FARMERS CLUBS .- During the year the county agents have as-

sisted in the organization of 140 Farmers Clubs for community improvement and cooperation, with a total membership of 5,802.

ROAD IMPROVEMENT WORK.—All the county agents have assisted more or less in road improvement work. They report having put on 192 road-improvement demonstrations resulting in the improvement of 1,262.5 miles of road.

To cover all the various activities of the Extension workers of the A. and M. College and the United States Department of Agriculture during 1916 would take too much space. It is sufficient to say that more or less work was done on nearly every problem that affects the wellbeing of the farmers and their families, from the economic production of farm products to saving human life by making successful war on typhoid and malarial fevers.

# ACCREDITED SCHOOLS

Students who have completed the course of study in accredited schools will be given credit at the A. and M. College according to the following schedule:

## List 1

Graduates from the following schools will be accepted for 15 or more units credit:

Ada	Drumright	Kingfisher
Afton	Duncan	Kiefer
Altus	Durant	Kiowa
Anadarko	Eldorado	Konawa
Apache	Elk City	Lawton
Arapaho	El Reno	Lehigh
Ardmore	Enid	Lexington
Atoka	Eufaula	Lindsay
Bartlesville	Phillips University	McAlester
Beaver	Academy, Enid	Madill
Beggs	Fairfax	Mangum
Billings	Fairview	Marietta
Blackwell	Francis	Marlow
Blair	Geary	Marshall
Boswell	Glenpool	Maud
Bristow	Grandfield	Medford
Broken Arrow	Granite	Miami
Carmen	Grove	Milburn
Carney	Guthrie	Mounds
Chandler	Guymon	Muldrow
Checotah	Oklahoma Methodist	Murray School of
Cherokee	University Acade-	Agriculture,
Chickasha	my, Guthrie	Tishomingo
Academy Oklahoma	Hartshorne	Muskogee
College for Women		Oklahoma School for
Chickasha	Agriculture, Broken	the Blind,
Claremore (U. P. S.)	Arrow	Muskogee
Cleveland	Hennessey	Mountain View
Clinton	Henryetta	Newkirk
Coalgate	Hinton	Noble
Collinsville	Hobart	Norman
Copan	Holdenville	Nowata
Academy Cordell	Hollis	Oilton
Christian College,	Hominy	Okemah
Cordell	Hugo	Okfuskee County High
Cordell	Hydro	School, Paden
Cushing	Keota	Oklahoma City
Custer City	Kingfisher College	Okmulgee
Davis	Academy, King-	Oktaha
Dewey	fisher	Pauls Valley
~ UW Cy	Honel	r auto valicy

Panhandle Agricul-Savre Tulsa tural Institute Seminole Tuttle Goodwell Shawnee Vinita Pawhuska Shattuck Walter Pawnee Snyder Wapanucka Stigler Stillwater Perry Watonga Ponca City Waurika Pond Creek Stilwell Wavnoka Sulphur Welch Poteau Pryor Tecumseh Weleetka Purcell Temple Wewoka Ramona Texhoma Wilburton Thomas Roff Woodward Tishomingo Wynnewood Ryan Tonkawa (U. P. S.) Academy Henry Ken-dall College, Tulsa Rush Springs Yukon Sallisaw Sapulpa

#### List 2

Graduates from the following schools will be accepted for 12 to 14½ units credit:

Alva. Erick Porum Bearden Gage Ouinton Bender Hailevville Randlett Britton Haskell Reed Broken Bow Idabel Spiro Calumet Vian Kingston Laurence Friends Waukomis Carnegie Council Hill Wakita Consolidated Academy, Gate Devo1 Lone Wolf District Drummond

#### List 3

Graduates from the following schools will be given 8 to  $11\frac{1}{2}$  credits. Necessary work for additional credits may be taken in the Secondary School at the A. and M. College:

Deer Creek Allen Morris Bigheart Depew Prague Braggs Gotebo Red Oak Canadian Howe Tupelo Valliant Crowder Ingersol1 Wister Dacoma Krebs Yale. Dale Laverne

## List 4

Graduates from the following list of schools will be given from 4 to  $7\frac{1}{2}$  credits, and will be expected to make up the remainder of the necessary credits in the Secondary School of the A. and M. College:

Balko Fort Gibson Red Rock
Boynton Garvin Sparks
Capron Gowan Wainright
Edmond Ochelata Webbers Falls
Forgan Okarche

# REGISTER OF STUDENTS

The classification of students is indicated by the following abbreviations:

Agri., School of Agriculture; M. E., Mechanical Engineering; C. E., Civil Engineering; E. E., Electrical Engineering; Arch., Architecture; H. E., School of Home Economics; S. and L., School of Science and Literature; Edu., School of Education; C. and M., School of Commerce and Marketing; V. M., School of Veterinary Medicine; Sec., Secondary School; Bus., Business; P. C. A., Practical Course in Agriculture; S. S., Summer Session; 1, 2, First and second semester, respectively; N, First registration second semester:

## Graduate Students

Biggin, Dorothea, B. S., 1916	Stillwater
Biggin, Dorothea, B. S., 1916	Stillwater
Burke, Elizabeth, B. S., 1913	Stillwater
Cooley, D. F., B. S., 1916	Stillwater
McCarrell, Fred, B. S., 1916 Olmstead, M. E., B. S., 1915	
Rapp, W. C., B. S., 1915	

# Undergraduate Students

Ables, Edward Abercrombie, Leona Abercrombie, Leona Abercrombie, Hugh Adams, J. Q. Adams, J. Q. Adelhart, Clara Ahern, Raymond Ahrberg, Fred Aikins, Grace M. Aikins, Grace M. Aikins, Grace Fay Alcott, Leslie Alcott, Arthur Alexander, Nell Altizer, Lottie Amery, Jonas Anderson, Roy L. Anderson, Roy L. Anderson, Andy Andrew, Myrtle Applewhite, Goree Armstrong, Ezra Armstrong, Gladys Armstrong, Chas. L. Armstrong, Ola Arnold, Leona Arthison, Roy Ault, Wayne	H. E., Sr. Sec. C. and M., Fr Sec. E. E., Jr. Agri, Fr H. E., Fr A. E., Fr Sec. Sec. C. and M., Soph H. E., Soph Special	1 1-2 S-1-2 N 2 S-1-2 1-2 1-2 1-2 1-1 1-2 1 1-2 1-2 1-2	Grant Cashion Cashion Foss Muskogee Muskogee Frederick Stillwater Lamont Lamont Lamont Stillwater Stillwater McKenzie, Tenn Alva Stillwater McLoud Idabel Cherokee Lockney, Texas Ringwood Ringwood Ringwood Chandler Cushing Chelsea Stillwater Blackwell
Austin, James		1-2	Muskogee

Avant, Nelms Axtell, Chas Axtell, Elsie Aycock, T. M Aynesworth, James	P. C. A	1-2	Erick
Axtell, Chas	P. C. A		Ripley
Axtell, Elsie	Sec	1-2	Ripley
Aycock, T. M.	C. and M., Jr	1-2	Altus
Aynesworth, James	P. C. A	1-2	Childress, Texas
Debends Harold	Due	1	Hobart
Bailey Warren	S and I. Fr	1-2	Snyder
Baird, W. D.	Sec.	1-2	Davenport
Baker, John	Agri., Soph	1-2	Stillwater
Baker, J. O	Sec	1-2	Perkins
Baker, Stanley	Bus	1-2	Vici
Ball, Chas	P. C. A	1-2	Arapaho
Ball, Frank	Sec.	1-2	Yukon
Panta Hugh	C and M Fr	1-2	Stillwater Hobart
Barbour I B	S and L. Fr	1	Iowa Park, Texas
Barde, Neil	Special	1-2	Guthrie
Barde, Julia	Bus	1-2	Guthrie
Barker, James	Sec	1	Oklahoma City
Barnes, Hazel	H. E., Jr	1-2	Stillwater
Barney, Mamie	SecS S	1-2	Stillwater
Barney, John Paul	. Sec	1-2	Stillwater Stillwater
Parray Marla	E E E	1 2	Stillwater
Rarth Ionnie	Sec. Fi.	1-2	Perkins
Barthel Hattie	Bus. S.S.	-1-2	Ralston
Barthel, Blanche	Sec. N	2	Ralston
Bartholomew, Beatrix	. SecS S	-1	Stillwater
Bartlette, ( Alice	Edu., SrS S	-1-2	Stillwater
Baty, Anna	Edu., Fr	1-2	Stillwater
Baur, Minnie	Sec	1	Stillwater
Bayliss, Adelia	Sec	1-2	Stillwater
Beard, Fred	Agri., Sopn	1-2	Stillwater Oklahoma City
Reck W I	Arri Tr	1-2	Hunter
Becker Francis	E. E. Fr	1-2	Stillwater
Beckett, Lida Leah	H. E., Fr	1	Stigler
Belitzer, Richard	- Sec	1	Oklahoma City
Bellamy, Constance	Bus	1-2	Stillwater
Bellis, Chas	. Agri., Soph	1	Stillwater
Benson, Jessie	. H. E., Fr	1	Muskogee
Benson, Kathryn	- Edu., Fr	1-2	Auburn, Indiana Madill
Berry Cecil	F F Sonh	1-2	Calumet
Berry, Lee	Sec. N	2	Delaware
Berry, Dora	. Sec	1-2	Ripley
Berry, R. E	. Agri., Soph	1-2	Ripley Pond Creek
Berry, Jewell	. Bus	1-2	Stillwater
Berryhill, Roby	- Bus	1	Stillwater
Bertrand, Thomas	- Edu., Fr	1	Agra
Bessire, Thomas	. C. and M., Fr	1-2	Headrick
Power Frederic	. Sec	1 2	Bates, Arkansas Skedee
Rever Hazel	H E Soph	1-2	Skedee
Bieberdorf, Gustay	Sec.	1-2	Orlando
Biggin, Mabelle	. H. E., SophS S	-1-2	Stillwater
Biggin, Lyle	- SecS S	-1-2	Stillwater
Bilyeu, Floyd	. C. and M., SophS S	-1-2	Stillwater
Bishop, Deane	. C. and M., Fr	1-2	Stillwater
Bishop, Lester	. Sec	1-2	Stillwater Mississinsi
Plack Tomes A	Acrei Ca	1-2	Strayhorn, Mississippi Wapanucka
Rlackhurn Ine	Edu Soph	1-2	Bellview, New Mexico
Blair. Wade	Sec.	1-2	Erick
Blakeslee, Mrs. C. B	Special N	2	Stillwater
Blanton, Clarence	. Sec	1-2	El Reno
Blazier, Warren	. E. E., Soph	1-2	Lawton El Reno
Bliefernich, Willie	. Sec N-	2	El Reno
Boerner, Carl	. Sec	1-2	Sparks
Bomark, Edna	P. Sec.	1 2	Pawnee Addington
Ronham Victor	Sec	1.2	Sallisaw
Bonham, Wendell	Agri. Fr	1-2	Keota
Booker, Carroll	. Bus	1	Wapanucka
Booth, V. J	. Argi., SrS S	-1-2	Wapanucka Milton
Borah, John R.	Bus	1	Colbert
Axtell, Chas. Axtell, Elsie Aycock, T. M. Aynesworth, James  Babcock, Harold Bailey, Warren Baird, W. D. Baker, John Baker, John Baker, John Baker, Stanley Ball, Chas. Ball, Frank Bandelier, George Banks, Hugh Barbour, J. B. Barde, Neil Barde, Julia Barker, James Barnes, Hazel Barney, Mamie Barney, Mamie Barney, Merle Barney, Merle Barney, Merle Barthel, Hattie Barthel, Hattie Barthel, Hattie Barthel, Hattie Barthel, Hattie Barthete, (Alice Bayliss, Adelia Beard, Fred Beaver, W. B. Becket, Lida Leah Belitzer, Richard Bellis, Chas. Benson, Jessie Benson, Kathryn Benton, Ralph Berry, Lee B	. H. E., FrSS	-1	Minneapolis, Minnesota

Round Otto	Bus. 1-2	Ryan
Douglas Was D	Con 1	34-41
Bousnee, wm. R	. Sec	McAlester _
Bowles, Harry	E. E. Fr. SS-1-2	Marksville, Louisiana
Dand Vonne	C and M Fr 616 12	The already
Doyd, Verne	· C. and M., 11000 1-2	Hooker Anson, Texas
Boyd, Joe	. Agri., Fr 1	Anson, Texas
Pand Oliva For	Soc 1 2	Hooker
Boyd, Olive Pay	37 . 0	TIOOKEI
Boyd, H. C	. Vet., Sr 1	Hooker
Roydston Virgie	Sec 1.2	Elk City Leonard, Texas Leonard, Texas
Dojuston, virgic	C 10	T
Braly, Warner L	. Sec 1-2	Leonard, Texas
Braly, B. B	Agri., Soph	Leonard, Texas
Prole Louis O	M F F	Mandin
Draiy, Louie O	M. E., Flancon	Nardin Dallas, Texas
Brannin, R. C	P. C. A 1-2	Dallas, Texas
Brantley Clyde	PCA N2	Goodwell
Dialiticy, Clyde	D	Goodwell
Brattin, Noble	. Bus 1-2	Stillwater
Brattin Wm F	E. E. Fr 1.2	Canron
Dearter, Charles	M F I.	Capron Stillwater
Brewer, Charles	. M. E., Jr 1-2	Stillwater
Brewer, Lawrence	Sec N 2	Bartlesville
Deight M H	Acri Tr 12	Oklahoma City
Dright, M. II.	Agil, Ji 1-4	Oklahoma City
Briscoe, lack	E. E., Sr 1-2	Perry
Prisone Frank	Acri Fr N 2	Perry
Diliscoc, I lank	7 2151119 1 1 1 1 2	Clary
Brixey, Cralance	. Bus 1	Chandler
Brock Mary	H. E. Soph 1-2	Kendrick
Day Jall A D	Acri Ca	V
Brodell, A. P	Agri., Sr 1-2	Keystone
Brower, Belle	H. E., Soph 1-2	Keystone Luther
Promor Manda	H F In 12	Luthon
Drower, Maude	11. E., J1 1-2	Luther
Brower, Mildred	H. E., Fr 1-2	Thomas_
Brown Perry	Sec 1-2	Caney, Kansas
Diowil, I city	T3.1 C.	A Incy, Ixalibas
Brown, Mary	Edu., Sr 1-2	Agra
Browne, Leslie	A. E. Fr SS-1-2	Guthrie
Decree Ide	See 1.2	
Brown, 1da	Sec 1-4	Stillwater
Brown, Myrtle	Bus 1-2	Ripley
Brumbaugh Norma	H F Sr 1.2	Broken Arrow
Diumbaugh, Norma	11. 12., 51	Diokell Milow
Bryan, Kenneth	Agri., Soph 1-2	Stillwater
Bryant, M. Ray	Agri., Ir 1-2	Frederick
Danies Temps	Ami E- 12	Stillwater
Dryce, James	Agri., Fr 1-2	
Buchanan, Effie	Sec 1	Morrison
Ruddrus Edward	Agri Sr 1.2	Muskogee
D. C. ata E 3:41	II TO Carl CC 1 0	Cailleandan
Dunington, Edith	п. Е., бори 5 5-1-2	Stillwater
Bull, Derrie A	Sec 1-2	Crawford
Bullen Lynn	S and L. Fr 1.2	Anadarko
D W. D	C	T J-1-1-
Burgess, Wm. K	Sec 1	Kendrick
Burkhead, Grace	Edu., Fr 1-2	Piedmont
Burkhand Lannard	Sec 1.2	Piedmont
Duikiteau, Leonard	7	T rediniont
Burnett, Mabelle	Bus 2	Stillwater
Burnham, Alice	H. E., Soph 1-2	Stillwater
Pueton Wolde	C E E- N 2	Mountain Park
Durton, waldo	C. E., Fr	Mountain Fark
Butler, Ruth	Sec 1-2	Guthrie
Butler Orom	M F F 2 12	Waukomis
Dutier, Orom	M. E., II	O 1
Butterheld, Anna	Sec N 2	Orlando
Caula Tana	C	D
Cagle, Leon	Sec 1	Dewey
Calame, Carroll	Bus. 1-2 Sec. 1 E. E., Fr. SS-1-2 C. and M., Fr[6]6 1-2 Agri, Fr 1 Sec. 1-2 Vet, Sr. 1 Sec. 1-2 Vet, Sr. 1 Sec. 1-2 Agri, Soph SS-1-2 Agri, Soph SS-1-2 Agri, Soph SS-1-2 Bus. 1-2 E. E., Fr. 1-2 M. E., Fr. 1-2 Agri, Fr. N 2 Bus. 1-2 E. E., Sr. 1-2 Agri, Fr. N 2 Agri, Fr. N 2 Agri, Fr. SS-1-2 Agri, Fr. SS-1-2 Agri, Fr. SS-1-2 Agri, Fr. SS-1-2 Agri, Fr. N 2 Bus. 1 H. E., Soph 1-2 Agri, Sr. 1-2 Agri, Sr. 1-2 H. E., Fr. SS-1-2 Sec. 1-2	Stillwater
Caldwell Lanore	H E Er SS12	Stillwater
C. 1.1 11 3T'	TT D D	Catilianata
Caldwell, Nita	H. E., Fr 1-2	Stillwater
Caldwell, Mable	Special 1-2	Stillwater
Caldwell Virgil	S and I Sr 12	Stillwater
Caldwell, Vilgii	5. allu L., 51 1-4	Stillwater
Caldwell, Ruth	H. E., Fr 1-2	Muskogee
Callaway S C	Agri Fr 1.2	Duncan
Comphell House	C 1-2	Vandam
Campbell, Homer	Sec 1-2	Verden
Campbell, Myrtle	Sec	Cushing
Campbell Toff	C and M Sonh 12	Mangum
Campbell, Jell	C. and M., Soph 1-2	Mangum
Canneld, Roy	Sec 1-2	Yale
Canfield, Ralph	S. and L. Soph 1-2	Yale
Cannada W T	Cassiel 1	Rockston, Texas
Cannada, W. J.	Special	ROCKSIOH, I CARS
Cantrell, Eula V	Bus 1-2	Ripley
Cantwell, I. W. Ir	S. and L. Soph 1-2	Stillwater
Cantwell Caralyn	S and I Fr CC10	Ripley Stillwater Stillwater
Cantwell, Carolyn	5. and L., Fr 5 5-1-2	Stillwater
Cantwell, Robert	Sec 1-2	Stillwater
Canlena Mayme	Sec N 2	Wynona
Carles Care	II TO C.	Mono
Carison, Grace	H. F., St., 1-2	Meno
C 1 AII		
Carlson, Alice	H. E., Soph	Meno
Carlson, Alice	H. E., Soph 1-2	Meno Meno
Carlson, Floyd	H. E., Soph	Meno
Carlson, Floyd Carlton, Buren	H. E., Soph 1-2 Agri., Jr 1-2 Bus. N 2	Meno
Carlson, Floyd Carlton, Buren Carlton, Marion	H. E., Soph	Meno McCaulley, Texas
Carlson, Floyd Carlton, Buren Carlton, Marion	H. E., Soph	Meno McCaulley, Texas
Carlson, Aice Carlson, Floyd Carlton, Buren Carlton, Marion Carlson, Ewing	H. E., Soph	Meno McCaulley, Texas
Carlson, Alice Carlson, Floyd Carlton, Buren Carlton, Marion Carlson, Ewing Carlton, Everette	H. E., Soph	Meno McCaulley, Texas McCaulley, Texas Anson, Texas McLoud
Carlson, Alice Carlson, Floyd Carlton, Buren Carlton, Marion Carlson, Ewing Carlton, Everette Carlton, E. E	H. E., Soph	Meno McCaulley, Texas
Carlson, Alice Carlson, Floyd Carlton, Buren Carlton, Marion Carlson, Ewing Carlton, Everette Carlton, E. E.	H. E., Soph	Meno McCaulley, Texas McCaulley, Texas Anson, Texas McLoud Hobart
Carlson, Alice Carlson, Floyd Carlton, Buren Carlton, Marion Carlson, Ewing Carlton, Everette Carlton, E. E. Carlton, Oscar	Sec.         N         2           Sec.         1-2           Sec.         1-2           H. E., Fr.         1-2           H. E., Fr.         1-2           Special         1-2           S. and L., Sr.         1-2           H. E., Fr.         1-2           Agri., Fr.         1-2           Sec.         1-2           Sec.         1-2           Sec.         1-2           Sec.         1-2           Special         1-2           Special         1-2           S. and L., Soph         1-2           S. and L., Soph         1-2           S. and L., Soph         1-2           Sec.         1-2           H. E., Soph         1-2           Agri., Jr.         1-2           Bus.         N           Bus.         N           Bus.         1-2           Agri., Fr         1-2           Bus.         1-2           Bus.         1-2           Bus.         1-2           Bus.         1-2           Bus.         1-2           Bus.         1-2	Meno McCaulley, Texas McCaulley, Texas Anson, Texas McLoud

Carlton Howard	Sec 1.2	Cooperton
Carlyla Kathlana	H F Sr SS1.2	Stillwater
Carlyle, Rathlene	Acri To CC12	CA:114
Carryle, neien	Agri., Jr	Stillwater
Carroll, Frank	P. C. A	Newkirk Gageby, Texas Mt. Vernon, Washington
Carson, Dewey	P. C. A 1-2	Gageby, Texas
Carson, Elmo	Sec N 2	Mt. Vernon, Washington
Carter, Grover C	Agri., Soph S S-1-2	Turley
Carter, A. E	Bus 1-2	Pawhuska
Carter, J. T	Agri., Soph 2	Newmarket, Tennessee
Carter, Zaida	Edu., Fr S S-1-2	Stillwater
Carter George	Sec. N 2	Olustee
Coch M A	Rue 12	Temple
Cash, M. A	Dus. 1-2	Temple Pauls Valley
Cash, Sill	II F C1	rauls valley
Cass, Maud	H. E., Soph 1-2	Tulsa
Castile, Eric	Agri., Soph 1-2	Norman
Castle, Lois	H. E., Jr 1-2	Okemah
Chambers, Loyd	Agri., Fr 1-2	Kerfoot
Chambliss, Ed A	P. C. A N 2	Mountain View
Chaney Marie	Sec. S S-1-2	Stillwater
Chase Dewey	P C A 1.2	Ralston
Chase F I	Ed. E. CC12	Dalatan
Clase, E. L.	C 51-4	Ralston
Chase, Lillian	Sec	Supply
Chase, Martin W	Agri., Soph 1-2	Ralston
Chewning, W. P	Agri., Sr 1-2	Stillwater
Chilcote, Maude	Special 1	Stillwater
Childress, Pansy	Sec	Millertown
Childs Arthur	C. and M. Fr 1	Pocasset
Charte Corneal	Sec 12	Paoli
Chart Dalah	D C A	T and an
Choat, Raipii	D. C. A	Lawton
Christian, Osborn	P. C. A 1-2	Watonga
Clapp, Vernon	E. E., Fr 1-2	Poteau
Clark, Paul	Bus 1	Stillwater Wardville
Clark, Horace N	Bus N 2	Wardville
Clary, Edgar	Bus 1	Chandler
Clausen Lillian	Edu. Soph SS.1-2	Stillwater
Clausen Minnie	Sec 12	Stillwater
Clausell, Willing	Dana 1-2	Cattlemater
Clausen, Einel	Dus. 1-2	Stillwater
Clay, Dennis	Sec 1-2	Coweta Ninnekah
Clay, Henry	S. and L., Soph S-1-2	Ninnekah
Clem, Harrison	Bus 1-2	Pawhuska
Cline, Dewey	Sec 1	Claremore
Clingenneel, Mae	Sec. S S-1-2	Stillwater
Clingenpeel Lillie	Sec 1.2	Stillwater
Class Lillian	Rue 12	Stillwater
Class, Lillian	Agai E.	Mana
Cloud, J. W	Agil., Fl.	Meno
Clump, homas D	Agri., Fr	Dover
Cochran, M. E	P. C. A 1-2	Omeda, Kansas
Coe, DeWitt	Sec 1	Glencoe Bon Wier, Texas
Coffman, J. B	C. and M., Fr 1	Bon Wier, Texas
Coker, Claude	P. C. A 1	Noble
Colbert Rufus	C. and M. Fr 1.2	Stillwater
Colhert Richard	C and M Fr SS12	Ada
Caldian Dand A	Agai En	Pond Creek
Colditon, Reed A	Ed. C.	Fond Creek
Cole, Pearl	Edu. Sr 1-2	Avery
Coleman, Elston	r. C. A 1-2	Newkirk
Coleman, Lester	E. E., Soph 1-2	Red Rock
Colglazier, Ray	Agri., Sopn 1-2	Stillwater
Conarro, Gladys	Bus S S-1-2	Stillwater
Cone. Randoll	Bus. 1-2	Wagoner
Conner T. H	Agri. Sonh 1	Stillwater
Conner Walter L.	Rue 1.2	Hobart
Compan Farl F	D. 1 2	Hobart
Conner, Earl F.	Dus	D1:-
Conrad, James U	Bus N 2	Rankin
Cook, Grace	Bus 1-2	Stillwater
Cooley, W. A	Edu., FrS S-1-2	Bridgeport
Coon, Ima	Sec 1-2	Durant
Cooter, John H	C. E., Fr 1-2	Miami
Cope, Gussie	Sec	Muskogee
Copeland, George	Bus.	Redmoon
Consedge W H	C and M Er CC12	Grove
Corn Maroria	C. and M., F1	Muskogee
Compact Days	Page 1	Navina
Cornwell, Dewey	Dus 1-2	Caillanatan
Correll, Laurence	Agri., Soph 1-2	Stillwater
Cotney, Viola	Bus 1-2	Stillwater
Cotter, Marie E	Sec 2	Fort Cobb
Carlton, Howard Carlyle, Kathlene Carlyle, Helen Carroll, Frank Carson, Dewey Carson, Elmo Carter, Grover C Carter, A. E Carter, J. T. Carter, Zaida Carter, George Cash, M. A. Cash, M. A. Cash, Shi Cass, Maud Castile, Eric Castle, Lois Chambers, Loyd Chambliss, Ed Chaney, Marie Chase, Dewey Chase, E. L Chase, Lillian Chase, Martin W. Chewning, W. P. Childote, Maude Childress, Pansy Childs, Arthur Choate, Corneal Choate, Ralph Christian, Osborn Clark, Paul Clark, Horace N Clary, Edgar Clausen, Lillian Clausen, Lillian Clausen, Ethel Clay, Dennis Clay, Dennis Clay, Henry Clem, Harrison Cline, Dewey Clingenpeel, Mae Close, Lillian Cloud, J. W Clump, homas D Cochran, M. E Coe, DeWitt Coffman, J. B Coker, Claude Colbert, Richard Coldiron, Reed A Cole, Pearl Coleman, Lester Colglazier, Ray Conner, J. H. Conner, Walter Conner, J. H. Conner, Garde Corned, Grace Cooley, W. A Coon, Ima Cooter, John H Cope, Gands Corneld, Dewey Cornell, Laurence Cornell, Laurence Cornell, Laurence Cornell, Laurence Cousins, Chass	Sec 1-2	Stillwater
Courtney, Mahlon	E. E., Soph 1-2	Edmond
Cousing Chas	Agri. Fr. 1	McLean, Texas

Cowen, John Cox, Asa Cox, Leo Coy, John Coyle, F. S Coyle, W. P Coyner, Paul Crabtree, E. C Crabtree, Elmer Crawley, Harold Crays, Irvin L Cronkhite, K. K Cummins, Ina Cunningham, Katherine Currey, Katherine Currey, Katherine Curtis, Bonnie	M. E., Fr	1-2	Eddy
Cox, Asa	. Sec	1-2	Stillwater
Cox, Leo	. Special	1-2	Comanche
Coy, John	Bus.	1-2	Yale
Coyle W P	P. C. A	1-2	Geary Geary
Covner Paul	P. C. A	1	Edmond
Crabtree, E. C.	Agri., Fr N	2	Steedman
Crabtree, Elmer	Sec N	2	Steedman
Crawley, Harold	. Sec	1-2	Piedmont
Crays, Irvin L	Sec.	12	Stillwater Watonga
Cummine Inc	Edu Soph	1-2	Stillwater
Cunningham Katherine	Edu., Soph	1-2	Glencoe
Currey, Katherine	SecS S	-1-2	Stillwater
Curtis, Bonnie	Edu., Fr	1-2	Uncas
			Ti.
Damon, Jehiel	Sec	1 2	Ringwood Ringwood
Damon Mortimer	Sec 55	1	Ringwood
Darlow, Anna	Bus.	1-2	Stillwater
Darlow, Albert	Agri. Fr.	1-2	Stillwater
Daugherty, Mary E	Sec	1-2	Dewey
Daugherty, J. Howard	Sec	1-2	Edmond
Davidson, Lois	Edu., SophS S	-1-2	Stillwater
Davis, Mary E	H. E., Fr	1	Stillwater
Davis, Alice	Edu., Fr	1-2	Ponca City
Davis, Ella	A F F. SS	1.2	Stillwater Shawnee
Davis Arthur	Agri Fr	1-2	Enid
DeBord Florence	Edu. Fr	1-2	Stillwater
Deen, Will I	Sec.	1-2	Stillwater Vinita
Deer, Walter R.	E. E. Fr.	1	Carney Gotebo
Dellinger, Amboyne	P. C. A	1-2	Gotebo
Demaree, Marianna	Bus	1-2	Woodward
Denny, Walter	Bus	2	Stillwater
Denton, Mary Belle	H. E., Jr	1-2	Newkirk
Denton, Guy V	M. E., Fr	1-2	Blackwell Newkirk
Devine Files	R110	1-2	Stillwater
Devine Aones	Sec	1	Stillwater Stillwater Shawnee
Diamond, Ardie	Bus.	î	Shawnee
Diamond, Claude	Sec	1	Shawnee
Dickinson, Wm. Calvin	Sec	1-2	Prague Walters
Dickson, Knowlton	S and L., SrS S	-1-2	Walters
Diggs, Cynthia	Sec	1-2	Stillwater
Dillard Harras E	E. E., Fr.	1-2	Okemah Angan Tawas
Dillon John	P C A	1-2	Anson, Texas Geary
Dillon, Lucile	S and L Sr	1-2	Hernando, Mississippi
Ditto, Vesta	Sec. Sec. S-	1-2	Averv
Ditto, Vera	Bus	1-2	Avery
Dizmang, Lyman	P. C. A	1-2	Duncan
Donart, Grace	Bus	1	Stillwater
Donehoo, Grace	H. E., Jr	1-2	Mangum
Donelson, James	Was Carl	1-2	Burbank Elk City
Dona Harman	F F F	1-4	Kiefer
Doty Lucille	H E Sonh	1-2	Stillwater Yale
Douglas, Marion	Edu., Sr	1-2	Yale
Douglas, G. N	C. E., Soph	1-2	Guthrie
Dryden, Marion	Sec	1-2	Stillwater
Dryden, Mollie	Sec	1-2	Stillwater
Dudley, Leo	P. C. A	1-2	Wapanucka
Duncan Par	Sec	1-2	Dustin
Duncan Rort	Sec	1-2	Glencoe Fairmont
Dunlavy, Henry E.	Agri Tr	1-2	Stillwater
Dye, Jessie	H. E., Fr	1-2	Stillwater
Currey, Katherine Curtis, Bonnie  Damon, Jehiel Damon, Marion Damon, Marion Damon, Mortimer Darlow, Anna Darlow, Anna Darlow, Albert Daugherty, J. Howard Davidson, Lois Davis, Mary E. Davis, Alice Davis, Mary E. Davis, Alice Davis, Joe I. Davis, Arthur DeBord, Florence Deen, Will J. Deer, Walter R. Dellinger, Amboyne Demarce, Marianna Denny, Walter Denton, Guy V. Denton, Esther Devine, Agnes Diamond, Ardie Diamond, Ardie Diamond, Ardie Diamond, Claude Dickinson, Wm. Calvin Dickson, Knowlton Diggs, Cynthia Dill, Glenn Dillard, Horace E. Dillon, John Dillard, Horace E. Dillon, John Dillon, Lucile Ditto, Vera Dizmang, Lyman Donart, Grace Donelson, James Donnelly, Louis Dose, Herman Doty, Lucile Douglas, Marion Doryden, Marion Dryden, Marion Dryden, Mollie Dudley, Leo Duke, Lucile Duncan, Ray Duncan, Bert Dunlavy, Henry E. Doveld Estav Docard Estav Docard	,		
Eastwood, Richard	Sec	1-2	Morrison
Eaton, Howard	P. C. A	1-2	Blanket, Texas
Eaton, Donald	Sec	1-2	Muskogee
Edmiston Alvin	Sec.	1-2	Ripley Hollis
Edwards Marshall	Special S	1	Asher
Edwards, Bruce	Sec.	1-2	Ames
Eastwood, Richard Eaton, Howard Eaton, Donald Eaton, Edna Edmiston, Alvin Edwards, Marshall Edwards, Bruce Elledge, Lester	Sec	1-2	Stillwater

Elliott. Rufus	Agri. Fr 1	Granite
Ellie Arthur	A F I- 1	2 Oklahoma City
Elli- Aun Duth	Des 1	2 Oklahoma City
Elliott, Rufus Ellis, Arthur Ellis, Mrs. Ruth Ellis, W. J. Emert, Glen Emmons, Mrs. Clara Emmons, Clarence Ethridge, Ernest Etter, A. A. Evans, Gail Evans, Ruth Evans, Hub Evans, Hub Evans, J. W. Ewing, Ida Ewing, J. S.	Bus	-2 Oklahoma City -2 Oklahoma City -2 Abilene, Texas
Ellis, W. J	C. and M., Fr	-2 Abilene, Texas
Emert, Glen	P. C. A 1	-2 Stillwater
Emmons, Mrs. Clara	Edu., Sr S S-1	-2 Stillwater
Emmons, Clarence	E. E. Soph	-2 Vinita
Ethridge Fraest	S and L Fr 1.	-2 Cold Springs
Etter A A	Dean 1	2 Annalanta
Etter, A. A	Dus.	-2 Anadarko
Evans, Gail	E. E., Fr 1	Randlett
Evans, Ruth	H. E., Sr 1-	-2 Stillwater
Evans, Howard	M. E. Fr 1.	-2 Dewey
Evans I W	Special N	2 Stillwater
Ewing Ide	U F F.	2 Handwich
Ewing, Ida	П. Е., ГГ	-2 Headrick
Ewing, J. S	C. and M., Fr	2 Guthrie
Fair, R. M.	Edu., SrS S-1	Valiant
Fairchild Chas	P C A 1.	-2 Morrison
Foirshild Louelle	C. 0. 1	-2 Morrison
Fairchild, Louella	Dec	-Z Morrison
Fairchild, Helen	Sec	-2 Morrison
Falconer, Katherine	Special 1	-2 Cheyenne
Fanning, Boni	Bus. 1	McFall, Missouri
Farr Donne	C and M Er 1.	-2 Clinton
Faminatan Olin	A and En	Anadarko
Farrington, Onn	Agri., Fr	Anadarko
Farrington, Wm. G	Sec	-2 Anadarko
Fauble, Laura	Special 1	-2 Shawnee
Fellows Reeda	H. E. Sr S-1	-2 Stillwater
Fellows Irie	Edu Sr SS-1.	-2 Stillwater
E D-4-	A F-	2 Itai
Fennema, Pete	Agri., Fr	-2 Lawton
Ferguson, Bessie	Bus 1	Harrah
Fewel, Rollo	Agri., Fr 1.	-2 Muskogee
Fidler Floyd	Vet Fr 1.	-2 Stillwater
Files Temes C	M F F. 1	2 Poloton
Files, James C	WI. E., FI	-2 Ralston
Finnell, H. H.	Agri., Sr	-2 Hartshorne
First, Geo. Albert	P. C. A 1	-2 Stillwater
Fish. Wayne	M. E. Ir 1.	-2 Helena
Fisher Florence	H F Sr 1.	-2 Clinton
Eighen Coatt	C.	2 A
Fisher, Scott	Sec	2 Avery
Fisher, Tearue	Agri., Soph	-2 Clinton
Fisher, Guy E	Special N	2 Stillwater
Fisher, Golda	Sec. 1.	-2 Yale
Fowler plorence	Sec 1	Perkins
Fowler Hamil	Co. 1	-2 Perkins
Fowler, mazer	Dec	2 Ferkins
Floyd, Geo.	Bus	-2 Pledger, Texas
Folk, Joe	Sec 1.	-2 Lawton
Folk, John	E. E., Soph 1-	
	C	-2 Lawton
Folsom Roger		-2 Lawton
Folsom, Roger	Sec	-2 Lawton -2 Heavener
Ford, Bland	Sec	-2 Heavener -2 Monroe
Folsom, Roger Ford, Bland Forrester, E, H	Sec. 1 Agri., Fr. 1	-2 Heavener -2 Heavener -2 Monroe Stratford
Ford, Bland Forrester, E. H. Forrester, Chas. T.	Sec. 1 Sec. 1 Agri., Fr. 1 Agri., Sr. 1	-2 Lawton -2 Heavener -2 Monroe Stratford -2 Stratford
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester. W. B.	Sec. 1 Sec. 1 Agri, Fr. 1 Agri, Sr. 1 Agri, Soph S S-1	-2 Lawton -2 Heavener -2 Monroe Stratford -2 Stratford -2 Stratford
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie	Sec. 1. Agri., Fr. 1 Agri., Sr. 1 Agri., Soph SS-1 H. F. Fr. 1	-2 Lawton -2 Heavener -2 Monroe Stratford -2 Stratford -2 Stratford
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph S S-1 H. E., Fr. 1 Agri. Sc. 1	Lawton Heavener Monroe Stratford Stratford Stratford Stratford Stratford Stratford
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E.	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph S S-1 H. E., Fr. 1 Agri., Sr. 1	Lawton -2 Heavener -2 Heavener -2 Stratford -2 Stratford -2 Stratford -2 Stratford -2 Stratford -2 Bushyhead
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred	Sec. 1 Agri, Fr. 1 Agri, Sr. 1 Agri, Soph S-1 H. E., Fr 1 Agri, Sr. 1 Arch, Sr. 1	2 Lawton 2 Heavener 2 Monroe 3 Stratford 2 Stratford 2 Stratford 2 Stratford 2 Bushyhead 2 Bushyhead
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R.	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph S-1 H. E., Fr. 1 Agri., Sr. 1 M. E., Fr. 1	Lawton Heavener Monroe Stratford Stratford Stratford Stratford Bushyhead Bushyhead Bushyhead Bushyhead
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph SS-1 H. E., Fr 1 Agri., Sr. 1 Arch., Sr. 1 M. E., Fr. 1 Bus. 1	Lawton - Heavener - Heavener - Heavener - Heavener - Heavener - Stratford - Stratford - Stratford - Bushyhead - Bushyhead - Blackwell - Tryon
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta Fow. W. R.	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph S-1 H. E., Fr. 1 Agri., Sr. 1 Mr. E., Fr. 1 Bus 1 E. E. Fr. 1	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Bushyhead Bushyhead Tryon Tryon Municipal Stratford
Folsom, Roger Ford, Bland Forrester, E. H Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E Forsyth, Fred Foudray, Walter R. Fowler, Leta Fox, W. R. Francis Alma	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph SS-1 H. E., Fr 1 Agri., Sr. 1 Arch., Sr. 1 M. E., Fr. 1 Bus 1 E. E., Fr. 1 Special	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Bushyhead Bushyhead Blackwell Tryon Mountain View Stillwater
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta Fow, W. R. Francis, Alma	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph S-1 Agri., Soph S-1 H. E., Fr. 1 Agri., Sr. 1 Mr. E., Fr. 1 Bus. 1 E. E., Fr. 1 Special 1	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Bushyhead Bushyhead Hackwell Tryon Mountain View Stillwater Stillwater
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta Fox, W. R. Francis, Alma Francis, Annie	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph SS-1 H. E., Fr 1 Agri., Sr. 1 Arch., Sr. 1 M. E., Fr. 1 Bus 1 E. E., Fr 1 Special 1 Sec. 1	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Bushyhead Bushyhead Blackwell Tryon Mountain View Stillwater Fort Cobb
Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta Fox, W. R. Francis, Alma Francis, Annie Francis, Myttle	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph S-1 Agri., Soph S-1 H. E., Fr. 1 Agri., Sr. 1 M. E., Fr. 1 Bus. 1 E. E., Fr. 1 Special 1 Sec. 1 Bus. S-1 Bus. S-1 Bus. S-1	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Bushyhead Bushyhead Hackwell Tryon Mountain View Stillwater Fort Cobb
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Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta Fox, W. R. Francis, Alma Francis, Annie Francis, Myttle Franklin, Leto Franklin, Leto	Sec. 1 Agri, Fr. 1 Agri, Sr. 1 Agri, Soph S-1 Agri, Soph S-1 H. E., Fr 1 Arch, Sr. 1 Arch, Sr. 1 Bus. 1 E. E., Fr 1 Special 1 Sec. 1 Bus. S-1 Bus. S-1 Sec. 1 Sec. 1 Sec. 1 Sec. 5	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Bushyhead Bushyhead Tryon Mountain View Stillwater Fort Cobb Grimes Grimes
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Folsom, Roger Ford, Bland Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, Nellie Forsyth, A. E. Forsyth, Fred Fouldray, Walter R. Fowler, Leta Fox, W. R. Francis, Alma Francis, Annie Francis, Almie Franklin, Cleto Franklin, Cleto Franklin, Leola French, James French, Larl French, Mattie Freund, Ethel Frieday, Gladys Friedemann, Otto Friedemann, Paul Friege, Ruby Frost, John A. Fry, Curtis Futoransky, Henry Gaasch, Katie	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph SS-1 Agri., Soph SS-1 H. E., Fr. 1 Argri., Sr. 1 Argri., Sr. 1 Argri., Sr. 1 Bus. 1 E. E., Fr. 1 Special 1 Sec. 1 Bus. SS-1 Sec. 5-1 Sec. 5-1 Sec. 1 Agri., Jr. 1 H. E., Sr. 1 Bus. 1 Bus. 5-1 Sec. 1 Agri., Jr. 1 H. E., Sr. 1 Bus. 1 H. E., Sr. 1 Bus. 1 Bus. 1 H. E., Sr. 1 Bus. 1 B	Lawton Heavener Heavener Stratford Stratford Stratford Stratford Stratford Bushyhead Blackwell Tryon Mountain View Stillwater Fort Cobb Grimes Grimes Grimes Stillwater Stillwater Stillwater Stillwater Cushing Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Cushing Stillwater Clashing Stillwater Clashing Stillwater Clashing Stillwater Clashing Stillwater Clashing Stillwater Stillwater Clashing Stillwater
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Evans, J. W Ewing, Ida Ewing, Ida Ewing, I. S  Fair, R. M. Fairchild, Chas. Fairchild, Louella Fairchild, Helen Falconer, Katherine Fanning, Boni Farr, Doane Farrington, Wm. G. Fauble, Laura Fellows, Reeda Fellows, Reeda Fellows, Iris Fennema, Pete Ferguson, Bessie Fewel, Rollo Fidler, Floyd Files, James C. Finnell, H. H. First, Geo. Albert Fish, Wayne Fisher, Forence Fisher, Scott Fisher, Golda Forler, Guy E. Fisher, Golda Fowler, Hazel Floyd, Geo. Folk, Jon Folsom, Roger Ford, Bland Forrester, E. H. Forrester, E. H. Forrester, Chas. T. Forrester, W. B. Forrester, W. B. Forsyth, A. E. Forsyth, Fred Foudray, Walter R. Fowler, Leta Fox, W. R. Francis, Annie Francis, Annie Francis, Annie Francis, Myttle Franklin, Cleto Franklin, Leola French, James F	Sec. 1 Agri., Fr. 1 Agri., Sr. 1 Agri., Soph SS-1 Agri., Soph SS-1 H. E., Fr. 1 Argri., Sr. 1 Bus. 1 Bus. 1 Bus. 1 Bus. 5 Bus. 1	Lawton Heavener Heavener Heavener Stratford Stratford Stratford Stratford Stratford Bushyhead Blackwell Tryon Mountain View Stillwater Grimes Grimes Stillwater Stillwater Stillwater Stillwater Stillwater Cushing Stillwater Stillwater Cushing Stillwater Stillwater Stillwater Cushing Stillwater Stillwater Cushing Stillwater

Garlock, Harry		
	. Agri., JrS S-1-	2 Vici
Gay. Thurman	C. and M., Soph 1-	2 Pawhuska
Gayman Ryron	Sec 1.	2 Agra
Couman Suo	H F F-	2 Agra
Gayman, Sue	D 1-	2 Agra
George, Tommie	. Bus 1	Paoli
George, Faber	. C. E., Fr 1-	2 Ravia
Georgia, R. M.	Agri., Fr 1-	Ripley Fort Smith, Arkansas
Geren L. C.	Agri Ir I.	2 Fort Smith Arkaneas
Cibbone Moire	P C A	2 Purcell
Gibbons, Meigs	D C A	C 1. D 1
Gilbert, Earl	P. C. A	2 Salt Fork 2 Salt Fork
Gilbert, Leo	P. C. A 1	2 Salt Fork
Gilbert, Bertha	Sec	2 Stillwater
Gilliam Winnie	H F Soph 1.	2 Chandler
Clandonning Cooner	C F L	Hartshorne
Glendenning, George	D. C. A.	a martshorne
Glerchmann, Joe	P. C. A	Okarche
Gloeckner, Gus L	M. ~, Soph SS-1-	Fayetteville, Texas Winnfield, Louisiana
Godfrey, Samuel	Agri., Soph 1-:	Winnfield, Louisiana
Goe Edith	Sec	2 Hayward
Coforth Aite	Coo 1	Vinita
Golorth, Alla	560	v illita
Goforth, Liman	Sec	Vinita
Goforth, Lula Belle	Sec 1-:	Vinita Vinita
Goldsmith, Rolland	P. C. A 1-2	Pond Creek Pond Creek
Goldsmith Farl P	P C A 1.	Pond Creek
Call Manie	D C A	M-Al-ster
Goil, MOXIE	1. C. A 1-	2 McAlester
Goodwinn, Albert	Bus. 1-2	Clinton
Goold, Christine	H. E., Soph 1-	Glencoe
Gordon, Isla	Bus. 1	Stillwater
Cordon Files	Rue 1.	2 Stillwater
Coldon, Ellen	C 37	C
Gourley, Lawrence	Sec	Grandfield
Graham, H. A.	Agri., Fr 1-2	Abbott, Arkansas
Grav. Willis	E. E., Sr 1-2	Stillwater
Gray Ruth	S and I Sr 1-	Stillwater
C-an W D	Ed. C. 1	Ada
Gray, W. D	Edu., Sr	Ada
Gray, Julia	H. E., Jr 1-2	2 May
Gray, Wilbur E	E. E., 17 1-2	2 Guthrie
Greene Mahel	Sec 1-	Stillwater
Green I-corre	Edia Es	Bethel
Green, George	C 1 M E	Manual's Automan
Green, R. C	C. and M., Fr N	Magnolia, Arkansas
Green, E. B	Agri., Soph 1-2	Cestos
Greene, Dorsie A	Agri., Fr 1-2	Gate
Greiner Agnes	Sec SS-1-	Stillwater
Griewold Coorge	Data : 1	Shamrock
Ciliswold, George	D C A	Shannock
Groves, Mari	P. C. A 1-4	Forgan
Grubb, Joe	P. C. A 1-2	Marlow
Gumm, T. H.	P. C. A 1	McMillan
Guthrie Virgil	P C A 1-3	Sentinel
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Hacker, Albert	C. and M., Fr 1-2	Purcell
Hacker, Albert	C. and M., Fr	Purcell Stillwater
Garlock, Harry Gay, Thurman Gayman, Byron Gayman, Sue George, Tommie George, Faber George, Faber Georgia, R. M. Geren, L. C. Gibbons, Meigs Gilbert, Earl Gilbert, Leo Gilbert, Earl Gilbert, Eertha Gilliam, Winnie Glendenning, George Glerchmann, Joe Gloeckner, Gus L. Godfrey, Samuel Goe, Edith Goforth, Lhian Goforth, Lhian Goforth, Lhian Goforth, Lhian Goforth, Lata Belle Goldsmith, Rolland Goldsmith, Earl R Goll, Moxie Goodd, Christine Goodd, Christine Gordon, Ellen Gordon, Ellen Gourley, Lawrence Graham, H. A. Gray, Willis Gray, Willis Gray, Wilbur E. Greene, Mabel Green, George Green, R. C. Greene, George Green, R. C. Greene, Gorge Green, George Greene, Mapes Griswold, George Groves, Karl Grubb, Joe Grumm, J. H Guthrie, Virgil Hacker, Albert Hall, J. I.	C. and M., Fr	Purcell Stillwater Stamford, Texas
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle	C. and M., Fr	Purcell Stillwater Stamford, Texas
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Reland
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Gertrude	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Gertrude Hall, Georgiana	C. and M., Fr. 1-2 Edu., Sr. S-1-2 P. C. A 1-2 In. E., Fr. 1-2 Sec. 1-2 Sec. 2 C. and M., Soph 1 H. E., Soph. S S-1-2	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Gertrude Hall, Georgiana Ham, Joe	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Stillwater Dickens, Texas
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Gertrude Hall, Georgiana Ham, Joe Ham, Joe	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Gertrude Hall, Georgiana Ham, Joe Hamby, Renic	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Kosoma
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, W. I. Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamilton, Hyral R	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamlin, Hyral R Hamon Edwin	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Stillwater
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renie Hamilton, Chester Hamlin, Hyral R Hamon, Edwin	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamilin, Hyral R Hamon, Edwin Hamer, Norman	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Custer Stillwater Ardmore Muskogee
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamlin, Hyral R Hamon, Edwin Haner, Norman Haner, Norman Hanifan, Annabelle	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore Muskogee Earlsboro
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamilin, Hyral R Hamor, Norman Haner, Norman Hanifan, Annabelle Harman, Edith	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Custer Stillwater Ardmore Muskogee Earlsboro Okemah
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Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, John Ham, John Hamby, Renic Hamilton, Chester Hamilton, Chester Hamilin, Hyral R Hamon, Edwin Haner, Norman Haner, Norman Hanifan, Annabelle Harman, Edith Harmon, Thelma	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater
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Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, John Ham, John Hamby, Renic Hamilton, Chester Hamilton, Chester Hamilin, Hyral R Hamon, Edwin Haner, Norman Hanifan, Annabelle Harman, Edith Harmon, Theima Harnden, M. G Harnden, M. G Harnden, Minnie Harp, Juna Harp, Juna Harp, N. G Harper, Roy Harris, Clive	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Oklahoma City Rismarck, Missouri
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renie Hamilon, Chester Hamilton, Chester Hamlin, Hyral R. Hamon, Edwin Haner, Norman Hanifan, Annabelle Harman, Edith Harmon, Thelma Harmden, M. G. Harnden, Minnie Harp, N. G. Harper, Roy Harris, Clive Harris, Clive	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater
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Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renie Hamilon, Chester Hamilion, Flourie Hamidan, Hamidan, Hamidan, Hamidan, Hamidan, Harmon, Theima Harmden, Minnie Harp, Juna Harp, N. G. Harris, Cive Harris, Clive Harris, Motier Harris, J. T.	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater
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Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renie Hamilon, Chester Hamilion, Hyral R Hamon, Horman Hanifan, Annabelle Harmon, Norman Harmden, M. G Harmden, M. G Harnden, Minnie Harp, Juna Harp, N. G Harris, Clive Harris, Clive Harris, Motier Harris, Emma Harris, Emma	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater
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Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renie Hamilon, Chester Hamilton, Hamilton, Chester Harrifan, Annabelle Harmon, Thelma Harmden, M. G. Harriden, M. G. Harriden, Minnie Harp, Juna Harp, N. G. Harris, Clive Harris, Motier Harris, I. T. Harris, Emma Harrison, Robert Harrison, Robert	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater
Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamilton, Chester Hamilton, Chester Hamilton, The Hamilton, Chester Hamolin, Hyral R Hamon, Edwin Haner, Norman Haner, Norman Hanifan, Annabelle Harman, Edith Harmon, Thelma Harnden, M. G Harris, I. T Harris, Ilive Harris, I. T Harris, Emma Harrison, Roy F	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Kosoma Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Oklahoma City Bismarck, Missouri Bismarck, Missouri Bismarck, Missouri Kiowa Ralston Davenport Kenefick Chickasha
Guthrie, Virgil  Hacker, Albert Hale, Fannie Hall, J. I. Hall, Nelle Hall, Flonnie Hall, Flonnie Hall, Gertrude Hall, Georgiana Hall, Georgiana Ham, Joe Ham, John Hamby, Renic Hamilton, Chester Hamilton, Chester Hamlon, Edwin Hanner, Norman Haner, Norman Hanifan, Annabelle Harman, Edith Harmon, Thelma Harnden, M. G Harnden, M. G Harnden, Minnie Harp, N. G Harp, N. G Harper, Roy Harris, Clive Harris, Motier Harris, Motier Harris, Emma Harrison, Roy F Harrison, Robert Harrison, Roy F	C. and M., Fr	Purcell Stillwater Stamford, Texas Davenport Beland Stillwater Stillwater Stillwater Dickens, Texas Dickens, Texas Nosoma Custer Stillwater Ardmore Muskogee Earlsboro Okemah Vinita Stillwater Stillw

Hartenbower, Ione	H. E., SophS S-	1-2	Stillwater Mayfield
Hartpence, Everette	Sec	1-2	Mayfield
Hartpence, Merle	Special	2	Stillwater
Harvey, Ruth	Edu., FrSS-	1-2	Stillwater
Hassen, F. N.	Bus.	1-2	Sulphur
Hastings, Howard	P. C. A	1-2	Perkins
Hactings, Annie	San	1.2	Dealine
Hastings, Italia	Can	1 2	Perkins
TI-st- Class	Sec.	1-2	Perkins
Haston, Clyde	Agri., Sopa S S-	1-2	Stillwater
Haston, Dewey	Sec	1-2	Stillwater
Hatch, T. J	Agri., Fr	1-2	Enid
Hatcher, Florence	SecS S-	1-2	Waurika
Hatcher, Otto	Agri., Ir	1-2	Stonewall
Hatfield, Earl	Sec.	1-2	Glencoe
Haves Philip	Edu Ir	1.2	Newkirk
Haymes W P	Agri Sr	1-2	Foril
Harmon Danie	Co.	1 2	Foyil
Trayman, bryan	M T T	1-2	Stillwater
riays, George P	M. E., Jr	1-4	Okarche
Hayth, James F	C. and M., Fr	1-2	Lawton
Head, Ruby Lee	Special	1-2	Purcell
Head, Herbert	C. and M., Fr	1-2	Purcell
Hedges, Frank	Bus	1	Pattonsburg, Missouri
Heffelfinger Gerald	Sec	1	Caner Kanese
Heisler Rert	From Er	î	Caney, Kansas Verden
Hold Clare Hone	H F Cook CC	້ າ	CA:11A-
Helu, Clara Hope	C. E., Sopii	1 0	Stillwater
Heimer, Richard A	C. E., ST	1-2	Gotebo
Henderson, DeWitte	Sec	1-2	Tribbey
Henderson, Ora	Sec	1-2	Tribbey
Henderson, Robert	Sec	1-2	Tribbey
Henderson, Ida Mae	H. E., IrS S-	1-2	Tribbey
Henderson, Myron	Sec.	1-2	Yale
Hendricks Elman	Rue	1-2	Homestead
Hondricks, Einer	Du5.	1 2	Daniestead
Transfer Margaret	Dec	1-2	Boynton
Hendrickson, Asner	E. E., Fr	1-4	Boynton
Hendrickson, Hugh	Sec	1-2	Boynton
Hennen, Hugh	C. and M., Soph	1	Shattuck
Henson, Tracev	H. E., Ir.	1-2	McLoud
Henson, Ray E	Agri., Ir	1-2	McLoud
Hertzler Toy	H E Er	1-2	Aline
Hervey Edwin	P C A	1.2	Marlow
Hosser Down	Date .	1 2	Glencoe
Tresser, Dewey	C I T C C C	1-2	
nesser, isaac 1	S. and L., Fr	1-2	Stillwater
Heusel, Chas. A	Agri., Fr	1-2	Salt Fork
Hickerson, Robert	P. C. A	1-2	Davidson
Hickman, Hugh	Sec	1	Wynnewood
Hickman, Geo. B	Agri., Soph	1-2	Snyder
Hicks, C. A.	Agri., Fr.	1-2	Stillwater
Higgins, Monty	Sec.	1-2	Springer
Hildehrand Nettie	H F It	1.2	Stulwater
Hildebrand Frie	Agei Soph SS	1.2	Stillwater Stillwater Stillwater
Hilaankana Dalah	C - M E-	1-2	Chillengter
Tingenberg, Kaiph	C. and M., Fr	1 2	Silliwater
fill, Lawrence	Sec.	L-2	Hill
Hill, Ruth	H. E., Sr	1-2	Oklahoma City
Hill, L. A	E. E., Fr	L-2	Poteau
Himes, Edna F	Bus	1-2	Glencoe
Hinkel, J. W	S. and L., Sr	1-2	Stillwater
Hinkel, W. S.	S. and L., Fr 1	1-2	Stinwater
Hinton, Bert	P. C. A	-2	Mannford
Hinton Harl	P C A	-2	Mannford
Hirrori, Frad	A F T-	-2	Iowa Park, Texas
Timed Tree	C and M En	2	Costlesia, lexas
Hirzel, Homer	C. and M., Fr	-2	Guthrie
Hitchcock, Ethel	Edu., Sr	-2	Stillwater
Hitchcock, Osborne	S. and L., Fr	2	Afton
Hitchcock, Edith	Edu., Sr S-1	-2	Stillwater
Hixson, Herschel	E. E., Fr	2	Shawnee
Hoeffer, Forrest	Bus	2	Stillwater
Hoeffer, Cecil	Bus.	2	Stillwater
Hogan, P. H	Sec. 1	-2	Bethel
Hoggard Paul	Edu Sr	-2	Hickory
Hogle Files	II E Cook	2	
Trogle, Ellen	п. Е., Борп	-4	Stillwater
nogle, George E	Bus.		Stillwater
Hoke, Jesse	C. and M., Fr	-2	Quay
Hoke, R. T.	Agri., Sr 1	-2	Quay
Holmes, Neta	H. E., FrS S-1	-2	Quay Stillwater
Hooper, Eva	Sec 1		Oklahoma City
Hoover, Jasper S	Agri., Fr 1		Oklahoma City Mountain View Mountain View
Hooney Puelson		0	3.6 . 1 371
	E. E. Fr. 1	-6	Mountain View
Hopkins Dewey	H. E., Soph. S. S. Sec. Special Edu., Fr. S. S. Sec. Special Special Edu., Fr. S. S. Bus. S. P. C. A. Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec	-2	Mountain View Wynnewood

Hopkins, Blanche	H. E., Ir SS-1-2
Honkins, Maude	H. r. Soph SS-1-2
Horner Clifford	Sec 1-2
Hoskinson Helen	H F I- 1-2
Hostattar Eston	A F Soph SS12
Hostick Albert	Coord 1 2
Hostick, Albert	Special 1-2
Houchin, Charley	Bus.
Houck, John	C. and M., Fr 1-2
Houghland, Edythe	Special N 2
Housh, Cecil	S. and L., Fr
Howe, Mrs. Grace	Special
Howe, William Henry	Special 1-2
Howe, Allen	SecS-S 1-2
Hucksten, James	P. C. A 1-2
Huff. Robert	Bus 1-2
Huffer Kenneth	P C A
Hughes Pouline	Ed. C. 2512
Lughes Will	Edu., 51 55-1-2
Trushes Constitution	Dec
Hugnes, Grace	Bus5-5 1-2
Hughett, Meri	Sec 1-2
Hull, Edward	C. and M., Fr 1-2
Hull, Ray	Bus 1-2
Hulse, Dewey	Sec 1
Hulse, Ollie	S. and L., Fr 1-2
Hunt, Esther	BusS S-1-2
Hunt, Ray	P. C. A 1-2
Hunter, Eleanor	Bus. S S-1-2
Hurst, Dick	P C A 1-2
Hurst I R	Agri Sr SS12
Hutcheson Ressie	Sec. 5 1 2
Hopkins, Blanche Hopkins, Maude Horner, Clifford Hoskinsson, Helen Hostetter, Eston Hostick, Albert Houchin, Charley Houck, John Houghland, Edythe Housh, Cecil Howe, Mrs. Grace Howe, William Henry Howe, Allen Huckstep, James Huff, Robert Huffer, Kenneth Hughes, Will Hughes, Will Hughes, Grace Hughett, Merl Hull, Edward Hull, Edward Hull, Edward Hull, Esther Hunt, Esther Hunt, Esther Hunt, Esther Hunt, Esther Hunt, Jick Hurst, Jirk Hurteson, Bessie Ikard, Edwina	Det D-1-2
Ikard, Edwina	Special 1-2
Ikard, F. Harrison	Vet. Soph 1-2
Ikard W L	Vet Sr 1
Ingram Claud	Sec 1.2
Inman Mayo	Soc 1
Teenhera Vorna	Edu Cook CC12
Teenberg, Verna	Edu., Soph
Isenberg, Olivea	Н. Е., Борп 55-1-2
Ives, Earl	M. E., Sr 55-1-2
Ives Hannan	Sec 1-2
Ives, Nellie	Sec1-2
Ives, Herbert	S. and L., Fr 1-2
Tack, Eula	Edu., SrS S-1-2
Jackman, Joe	Sec. 1
Jacobs, Caton	P. C 1-2
Tacobs Celia I.	H E Soph 1.2
Jacob Fureka	H F Fr 1.2
Incohe Levelle	Coo 12
Janeway Chao H	C and M Sonh SS12
Janeway, Chas. II	C. and M., Soph 5-1-2
Jantz, Benjamin	Sec 1
Jarvis, Floyd	Sec1
Jenkins, Henry B	Sec 1-2
Jenkins, Bonnie	Sec 1-2
Jenkins, Ernest	Sec 1-2
Jenkins, H. E.	Edu., Soph 1-2
Johns, W. L.	C. and M., Soph 1-2
Johnson, Eva	SpecialS S-1-2
Johnson, Valerie	Edu., Soph 1-2
Johnson, Ruby	Edu., Soph 1-2
Johnson, Fountain	Sec 1
Johnson, H. E	C. and M., Sr. SS-1-2
Johnson, Edwin	Arch. Fr. 1
Johnson, Mrs. Ressie	Bus. S S-1-2
Johnson, W. D	Agri Fr 1-2
Johnson, H. I	E E Ir 1-2
Johnson Donald M	Son 1
Johnston George H	F F F-
Johnston, George H	E. E., FI
Jones Duth	Sec
Jones, Ruth	Sec 1-2
Jones, J. S	P. C. A 1-2
Hurst, Dick Hurst, J. B. Hutcheson, Bessie Ikard, Edwina Ikard, F. Harrison Ikard, W. L. Ingram, Claud Inman, Maye Isenberg, Verna Isenberg, Vivan Ives, Earl Ives Hannah Ives, Nellie Ives, Herbert Jack, Eula Jackman, Joe Jacobs, Caton Jacobs, Celia L Jacob, Celia L Jacob, Eureka Jacobs, Louella Janeway, Chas. H Jantz, Benjamin Jarvis, Floyd Jenkins, Henry B. Jenkins, Bonnie Jenkins, Henry B. Johnson, Eva	Sec 1-2
Jones, Thelma	Sec 1-2
Jones, Aline	Sec1-2
Jones, Hazel	SpecialS S-1-2
Jones, Fred L	S. and L., SrS S-1-2
Jones, Daisy	Sec. 1-2 Sec. 1-2 Sec. 1-2 Sec. 1-2 Special SS-1-2 S. and L., Sr. SS-1-2 Bus. 1-2 C. and M., Suph 1-2
Jones, Cecil G	C. and M., Soph 1-2
Jones, Ray Jones, Thelma Jones, Aline Jones, Hazel Jones, Fred L Jones, Daisy Jones, Cecil G Jones, Goldia	H. E., Soph S S-1-2

Stillwater Stillwater Enid Stillwater Calumet Verden Verden Stillwater Hayward Orlando Stillwater Norman Stillwater Stillwater Stillwater Orlando Stillwater Ames Stillwater Stillwater Stillwater Stillwater Hollis Hollis Stillwater Estella Stillwater Pocasset Jefferson Stillwater Chickasha Chickasha Chickasha Hollis Bristow Stillwater Stillwater Avery Avery Avery Stillwater Mead Stillwater Stillwater Stillwater Stillwater Stillwater Meno Earlsboro Frederick Perkins Perkins Perkins Stillwater Doxey Hollis Hollis Porum Tulsa Tulsa Waco, Texas Calhoun, Kentucky Tonkawa Helena Oklahoma City Anadarko Cushing Stillwater Lawton Stillwater Mehan Glencoe Stillwater Stillwater

Stillwater Stillwater Stillwater

Kane, Cora	H. E., Fr	1-2	Stillwater
Katz, Sigmund	Agri., Fr	1-2	Stillwater Sapulpa
Keen, Frieda	. Bus	1-2	Redmoon
Keen Paul	. Sec	1-2	Rankin
Keith, Lena	. Sec	1-2	Stillwater
Keller, Floyd	S. and L., Sr	1-2	Hartshorne
Keller, Harold E	Engr., Fr	2	Davenport
Kello, Richard	C. and M., Soph	1-2	Muskogee
Kelsey, John	P. C. AN	2	Muskogee Waynoka
Kemp, Marion K	Bus	1	Champaign, Illinois
Kemp, Harvey G	. C. and M., Soph	2	Guthrie
Kenny, Roy	Agri., Jr	1-2	Blackwell
Kerntke, Frances	Bus	1-2	Stillwater
Kerr, L. B	Bus	1	Pauls Valley
Ketchum, John E	C. and M., Soph	1-2	Foraker Foraker
Ketchum, Florence	Bus	1-2	Foraker
Keudell, Grace	Bus	1-2	Stillwater
Keys, Alma	. H. E., Sr	1-2	Rigelow, Arizona
Keys, Ona	. BusS S	-1-2	Stillwater
Kibler, J. B	. E. E., Jr	1-2	McLean, Texas
Kilpatrick, Charlie	Agri., Sr	1-2	Hunter
Kilpatrick, Maude	H. E., Soph	1-2	Hunter
Kimbell, James A	Agri., Sr	1-2	Altus
Kimbell, Otey	S. and L., Fr	1	Altus
King, Nancy Ann	H. E., FrS S	-1-2	Enid
King, Emma	Sec	1	Enid
Kingham, Jasper	Bus	1-2	Sweetwater
Kissick, Elmer A	Agri., Jr	2	Sweetwater Yukon
Knight, Eugene	Agri., Soph	1-2	Stillwater
Knox, Verne D	Sec N	2	Perkins
Kohhiem, W	Special	1	Dartmund, Germany Dickens, Texas
Koonsman, Martin	Bus	1	Dickens, Texas
Kramer, Loyd	Sec	1-2	Maramec
Kramer, Glenna Marie	Sec N	2	Maramec
Kramp, Ed	M. E., Jr	1-2	Okeene
Kramp, W. C	C. and M., Fr	1-2	Okeene
Krisher, Sherman	Agri., Soph	1-2	Walter
Krone, Jessie M	H. E., Jr		Chandler
		1-2	
Kuhlmeier, Leslie	Sec.	1-2	Hunter
Kuhlmeier, Leslie Kutis, Frank M	Sec. Vet. Soph. S S	1-2 -1-2	
Kuhlmeier, LeslieKutis, Frank M	Sec. Vet. SophS S	1-2 -1-2	Hunter
Kuhlmeier, Leslie	Sec. Vet. Soph. S S	1-2 -1-2 1-2	Hunter
Kane, Cora Katz, Sigmund Keen, Frieda Keen Paul Keen, Frieda Kelen, Frieda Keler, Floyd Keller, Harold E Keller, Richard Kelsey, John Kemp, Marion K Kemp, Harvey G Kenny, Roy Kerntke, Frances Kerr, L Ketchum, John E Ketchum, John E Ketchum, Florence Keudell, Grace Keys, Alma Keys, Ona Kibler, J Kilpatrick, Charlie Kilpatrick, Maude Kimbell, James A Kimbell, James A Kimbell, James A Kimbell, Jasper King, Nancy Ann King, Emma King, Emma King, Emma Kingham, Jasper Kingham, Jasper Kohhiem, W Koonsman, Martin Kramer, Loyd Kramer, Glenna Marie Kramp, Ed Kramp, Ed Kramp, Ed Kramp, Essie M Kuhlmeier, Leslie Kutis, Frank M LaBohm, Henry Lahr, Herbert	Sec. Vet. Soph. S S Sec. Agri, Fr.	1-2 -1-2 1-2 1-2	Hunter Edmond
Kuhlmeier, Leslie Kutis, Frank M  LaBohm, Henry Lahr, Herbert Lamb, Milo	Sec.         Vet.         Soph.         S S           Sec.         Agri., Fr.         Sec.         Sec.	1-2 -1-2 -1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage
Kuhlmeier, Leslie Kutis, Frank M  LaBohm, Henry Lahr, Herbert Lamb, Milo Lane, Bessie	Sec.         Vet.         Soph.         S S           Sec.         Agri., Fr.         Sec.         Bus.	1-2 -1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska
Kuhlmeier, Leslie Kutis, Frank M	Sec.         Sec.           Agri, Fr.         Bus.           E. E., Fr.         N	1-2 -1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska
Kuhlmeier, Leslie Kutis, Frank M  LaBohm, Henry Lahr, Herbert Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter	Sec.         Sec.           Agri, Fr.         Sec.           Bus.         N           E. E., Fr.         N	1-2 -1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea
Kuhlmeier, Leslie Kutis, Frank M  LaBohm, Henry Lahr, Herbert Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude	Sec.         Vet.         Soph.         S S           Sec.         Agri., Fr.         Sec.         Bus.         Bus.         N           E. E., Fr.         N         Bus.         N         Bus.         Bus.         N         Bus.         Bus.         N         Bus.         N         Bus.         Sec.         N         Bus.         N         Bus.         Sec.         N         Bus.         Bus.         N         Bus.	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright
Kuhlmeier, Leslie Kutis, Frank M  LaBohm, Henry Lahr, Herbert Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill
Kuhlmeier, Leslie Kutis, Frank M  LaBolam, Henry Lahr, Herbert Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary	Sec.         Sec.           Agri, Fr.         Sec.           Bus.         N           E. E., Fr.         N           Bus.         N <td>1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2</td> <td>Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater</td>	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec.         Scc.           Vet.         Soph.         S S           Sec.         Scc.         Scc.           Bus.         Bus.         N           Bus.         Bus.         Scc.           Bus.         Scc.         N           Bus.         N         N	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 2 1-2 1-	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec.         Sec.           Agri., Fr.         Sec.           Bus.         N           Bus.         N           Bus.         N           Bus.         N           E. E., Soph.         S           Bus.         N           Edu., Fr.         N	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks
Kuhlmeier, Leslie Kutis, Frank M	Sec.         Sec.           Agri, Fr.         Sec.           Bus.         N           E. E., Fr.         N           Bus.         N           Hus.         N           Sec.         N           Bus.         N           E. E., Soph.         S           N         S           Bus.         N           E. E., Soph.         S           Bus.         N           Edu., Fr.         Edu., Fr.           Edu., Fr.         Edu., Fr.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2-1-2 1-2-1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec.   Soph.   S S	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Cheyenne
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Cheyenne
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 -1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas Geary
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater
Kuhlmeier, Leslie Kutis, Frank M	Sec.   Sec.   Sec.   Agri., Fr.   Sec.   Sec.   Bus.   Bus.   Bus.   Bus.   E. E., Soph.   S. S. Bus.   N. Edu., Fr.   Edu., Fr.   Edu., Fr.   Sec.   P. C. A.   Bus.   S. and L., Jr.   Sec.   Special   N. Agri., Fr.   P. C. A.   Edu., Sora   P.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater
Kuthlmeier, Leslie Kutis, Frank M	Sec	1-2 1-2 1-2 1-2 1-2 1-2 2 1-2 2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Cashion
Kuhlmeier, Leslie Kutis, Frank M	Sec	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Cheyenne Purcell Stillwater Chandler Cashion Stillwater Chandler Cashion Stillwater Mill Creek
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. N Bus. Bus. E. E., Soph. H. E., Soph. S S Bus. N Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor P. C. A Edu., Sor Edu., Sor Special N Agri, Fr. P. C. A Edu., Sor P. C. A Edu., Sor Edu., Fr. Edu., Sor Edu., Fr. Edu., F	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Cashion
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. N Bus. Bus. E. E., Soph. H. E., Soph. S S Bus. N Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor P. C. A Edu., Sor Edu., Sor Special N Agri, Fr. P. C. A Edu., Sor P. C. A Edu., Sor Edu., Fr. Edu., Sor Edu., Fr. Edu., F	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Martiett, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. N Bus. Bus. E. E., Soph. H. E., Soph. S S Bus. N Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor P. C. A Edu., Sor Edu., Sor Special N Agri, Fr. P. C. A Edu., Sor P. C. A Edu., Sor Edu., Fr. Edu., Sor Edu., Fr. Edu., F	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker McAlester
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Marfield  McAlester Mayfield
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Cheyenne Purcell Stillwater Cheyenne Purcell Stillwater Hotel Stillwater Stillwater Stillwater Mowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker  McAlester Mayfield Bonanza, Arkansas
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Cheyenne Purcell Stillwater Cheyenne Purcell Stillwater Hotel Stillwater Stillwater Stillwater Mowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker  McAlester Mayfield Bonanza, Arkansas
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Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker  McAlester Mayfield Bonanza, Arkansas Hickory Lone Wolf Haworth
Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker McAlester Mayfield Bonanza, Arkansas Hickory Lone Wolf Haworth Stillwater
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Lamb, Milo Lane, Bessie Lane, Olen Lane, Gunter Langan, Gertrude Larner, Ray A Laughlin, Mary Laughan, Dennis Lawhorn, Sadie Leach, Florence Leach, Roy Leary, Thomas Lee, Kenneth B Leslie, Lewis Lewis, Harry Lindemann, LeRoy Lindsey, Wulam Loganbill, Aldue Long, Amy Long, Clyde Long, Louella Lowrance, Chas. O Lyman, Mildred L	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker  McAlester Mayfield Bonanza, Arkansas Hickory Lone Wolf Haworth Stillwater Stillwater Stillwater Stillwater Stillwater Modelster Mayfield Stillwater Modelster Mayfield Stillwater Mill Creek Stillwater Mill Creek Stillwater Modelster Mayfield Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Grove
Kutlmeier, Leslie Kutis, Frank M	Agri, Fr. Sec. Bus. E. E., Fr. Dus. Bus. E. E., Soph. H. E., Soph. S S. Bus. N Edu., Fr. Edu., Fr. Edu., Fr. Sec. P. C. A Bus. S and L., Jr. Sec. Special N Agri, Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Edu., Sor Fr. P. C. A Egri, Fr. P. C. A Egri, Fr. Sec.	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Hunter Edmond  Oklahoma City Waynoka Gage Pawhuska Shawnee Chelsea Drumright Dill Stillwater Stillwater Jenks Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Stillwater Cheyenne Purcell Stillwater Stillwater Stillwater Bartlett, Texas Iowa Park, Texas Geary Chandler Cashion Stillwater Mill Creek Hooker McAlester Mayfield Bonanza, Arkansas Hickory Lone Wolf Haworth Stillwater Stillwater

McElroy, C. E. McFall, Frank McFall, Ruby McGel, Ruby McGee, Maxie McGee, Flo McGee, Flo McGee, Iris McGuin, A. J. McIntire, Vernon McKee, Calvin McKemie, Glenn Mackenzie, Frances McKinnon, Letha McKinnon, Letha McKinnon, Lotha McKnight, Emmett McKnight, Goldie McLain, Ethel McMannis, Edward McNally, Wm. O. McNeely, Oscar McSpadden, Irene McTaggart, Ernest	F F Sr	1	-2 Pineland, Texas
McFall Frank	Ser Standard	i	Fastherston
McFall Puby	Ed. Er	1	Featherston
McCoo Movie	Soc.	1	-2 Featherston Oklahoma City
McCoo Flo	Sec	001	Oklanoma City
MaCas Passis	Sec	.S S-1	-2 Perkins
McGee, Dessie	TT E E.	1	-2 Perkins
McGee, Ins	n. E., Fr	1	-2 Waynoka
McGuin, Marie	P. C. A	1.	-2 Lamont
McGuin, A. J.	F. C. A	1	-2 Lamont
McIntire, vernon	Sec.	0 0 1	-2 Meno
McKee, Calvin	C. and M., Soph	2 2-1	-2 Cooperton -2 Coalgate
McKemie, Glenn	Agri., Fr	0 0 1	-2 Coalgate
Mackenzie, Frances	Bus.	S S-1	-2 Stillwater
McKinnon, Letha	Sec.	1	Glencoe
McKinnon, J. J.	A. E., Soph	1.	-2 Eudy -2 Glencoe
McKinnon, Chas	Sec	1.	-2 Glencoe
McKnight, Emmett	Sec	1-	-2 Agra
McKnight, Gordie	Edu., Fr	S S-1	-2 Agra
McLain, Ethel	Sec	1.	-2 Muskogee
McMannis, Edward	Bus	1.	-2 Gage
McNally, Wm. O	Sec	N	2 Canadian
McNeely, Oscar	M. E., Soph	1.	-2 Goltry
McSpadden, Irene	H. E., Fr	1	Chelsea
McTaggart, Ernest	C. and M. Soph	1.	-2 Stillwater
	or and har, populari	-	- Dillinatel
M - 1: C1- 1	C 1 M C1	- 4	2 4 1
Madigan, Gladys	C. and M., Soph	C C T.	2 Ardmore
Madigan Blanche	H. E., Sr	2 2-1-	2 Ardmore
Mahaffey, Max	M. E., Jr	S S-1-	2 Stillwater 2 Stillwater 2 Stillwater 2 Stillwater
Mahaffey, Katie	Sec	S S-1-	2 Stillwater
Main, Francis E	E. E., Fr	1-	·2 Stillwater
Main, Lois	Sec	1-	2 Stillwater
Main, Harold G	Bus	1-	2 Stillwater
Malov, Minnie	Bus	S S-1-	Wheeler, Texas
Maphet, Chas, M.	E. E., Fr	1-	2 Meno
Marcia, Glenn	E. E., Fr.	1-	2 Savre
Markland, Waldo	C. and M. Fr	1-	2 Sayre 2 Woodward 2 Nelagony
Markle Donald	Rus	î.	2 Nelagony
Markwell Rachel	H F Sonh	S S.1.	2 Stillwater
Markwell Haral	Edu Te	5 5 1	2 Stillwater
Malkwell, Hazel	A: C1-	0 0 1	2 Stillwater
Markwell, Earl	Agri., Sopn	5 5-1-	2 Stillwater
Mariett, Abba	Sec	5 5-1-	2 Newby
Maroney, Hugh	S. and L., Sr	2 2-1-	2 Stillwater
Marsh, Daisy Dean	Special	a a 1-	2 Kingfisher
Marsh, W. S	Agri., Soph	S S-1-	2 Kingfisher
Marshall, Joe	Sec	1-	2 Goodnight
Martin, Archie	Edu., Soph	1-	2 Stillwater
Martin, Dalta	Bus	1-	2 Morrison
Martin, Ewing	Edu., Sr	1	Hickory
Martin, J. E.	S. and L., Sr.,	1-	2 Mounds
Martin, Esther	H. E. Soph	1-	2 Stillwater
Martin, eRoy	Sec.	1-	2 Stillwater
Martin, Frank	Edu. Fr	1-	2 Sallisaw
Mark Myron	C E Sr	1.	2 Pawnee
Mathews Richard	S and I Sr	S S.I.	2 Stillwater
Matrice Chas	Rue Bus	1	Perkins
Mathieu Flro	Agri Sa	1.	2 Lawton
Mauch Done	Coo	1	2 Chandler
Maurer Rill	500	1	Clanco
Man Dan	566.	1	Glencoe
May, Roy	D	1.7	2 Scullin 2 Scullin
May, Susie	Bus.	1-	2 Scullin
Meade, Margaret	Edu., Fr	1-	2 Shawnee
Means, Emory	Sec.	1	2 Stillwater
Meeker, Julian R	C. and M., Fr	1-1	2 Temple
Melton, Audrey	Arch., Fr	N.	2 Duncan
Miller, Hazel	Sec	1	Hominy
Miller, W. H.	M. E., Soph	_ 1	Shawnee
Millikan, C. V	S. and L., Sr	S S-1-	2 Stillwater
Minor, N. N.	Agri., Soph	1-:	2 Miami
Mitchell, G. V	M. E., Soph	1-3	2 Stillwater
Mittendorf, 1. H.	Agri., Sr	1-:	2 Calumet
Mittendorf, Oscar	Agri., Soph	1-	2 Calumet 2 Calumet
Montgomery, Bertie	Bus.	1-	2 Mason
Moody, Herbert	Rus.	1	Porter
Mooney George R	Agri Fr	N.	2 Walter
Moore warles	S and I Sonh	1 1	2 Wankomis
Moore Horatio	S. and L., Sopn	1-4	2 Stillwater
Moore George	P	1-,	Nowater
McSpadden, Irene McTaggart, Ernest  Madigan, Gladys Madigan Blanche Mahaffey, Max Mahaffey, Katie Main, Francis E. Main, Lois Main, Harold G. Maloy, Minnie Maphet, Chas. M. Marcia, Glenn Markle, Donald Markwell, Rachel Markwell, Earl Marlett, Abba Maroney, Hugh Maroney, Hugh Marsh, Daisy Dean Marsh, W. S. Marshall, Joe Martin, Esther Martin, Esther Martin, Esther Martin, Esther Martin, Frank Marin, Frank Marin, Frank Mars, Wyon Martin, Frank Mars, Wyon Mark, Myron Mathews, Richard Mathaias, Chas Mathieu, Elro Maucey, Bill May, Roy May, Susie Meade, Margaret Means, Emory Meeker, Julian R. Melton, Audrey Miller, Hazel Miller, Hazel Miller, Hazel Miller, Hazel Miller, Hazel Miller, Hazel Miller, Hamilikan, C. V Mittendorf, J. H Mittendorf, J. H Mittendorf, Oscar Moody, Herbert Mooney, George Moore, George Moore, George Moore, Horatio Moore, George Moore, Horatio Moore, George Moore, Horatio	A Carl	1-1	2 Nowata
morgan, A. C	Agn., Sopa	A-1	2 Garber

Morgan, Vera Morris, J. W Morris, Roby Morrison, Jesse Morrison, W. W Moseley, Mossie Moseley, Francis Mott, Louis W Moyer, Otto J Muncie, Blanche Munyon, Clyde Murphy, Henry F Murray, C. E Murray, James Myers, James A Myers, Walter Myers, Walter Myers, Ruth Myers, Geo. M	H E Sr	1.2	Stillwater
Morris, I. W	Vet Tr	1	Stillwater
Morris Rohy	Acri Fr	1	Purcell
Morrison Tessa	S and I Fr CC	12	
Morrison, JUSSE	Anni En	1 2	Noble
Manalan Massis	II E C1	1-2	Bartlesville
Moseley, Mossie	F. E., Sopii	1-2	Stillwater Stillwater
Most Toric W	Edu., 5r 5-	1-2	Stillwater
Mott, Louis vy	Special	1	Tulsa
Moyer, Otto J	Agri., Sr	1-2	Deer Creek
Muncie, Blanche	H. E., Sr S-	1-2	Byron
Munyon, Clyde	C. and M., Fr	1-2	Morrison
Murphy, Henry F	Agri., Jr	1-2	Glencoe
Murray, C. E	Agri., Sr	1-2	Kenefic Manitou
Murray, James	E. E., Soph	1-2	Manitou
Myers, James A	P. C. A	1-2	Eldorado
Myers, Walter	P. C. A	1	Choctaw
Myers, Ruth	H. E., FrS S-	1-2	Oklahoma City
Myers, Muriel	Sec	1-2	Stillwater
Myers, Geo. M	E. E., Fr	1-2	Shawnee
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Nach P M	F F C.	1 2	Paden
Nash, D. M	A ami En	1-2	
Nash, Orman	Agri., Fr	1-2	Paden
Nation, John G	Sec	1-2	Quinton
Nault, Joe	Sec	1-2	Ökeene
Neaves, Eunice	H. E., Fr	1-2	Tryon
Neerman, Katherine	S. and L., Sr	1-2	Tryon Tulsa Catesby
Nehrbass, Paul	P. C. A	1-2	Catesby
Nelson, B. B	Agri., Soph	1-2	Stillwater
Nelson, Okey	Bus	2	Stillwater
Nelson, Harvey R	Sec	1-2	Balko
Nelson, Edwin	Sec	1-2	Ames
Nelson, I. A	S. and L. Sr. SS-	1-2	Stillwater
Nelson Bendetta	Sec SS.	1-2	Stillwater
Nelson Toe	C F Sr SS.	1-2	Stillwater
Notherton Cooil	S and I Sonh	1-2	Bernice
Notice Top	C T C.	1.2	Wandman North Daleste
Netick, Joe	C. E., SI	1-2	Wyndmere, North Daketa Tishomingo
Newberry, Calvin	E. E., Fr.		Lisnomingo
Newell, Rose	Special	1-2	Stillwater
Newton, Featt	Sec 35-1	1-2	Stillwater
Newton, R. C.	Special	l-2 l-2	Stillwater
Newton, R. C Nicholson, Patti	Special	l-2 l-2 l-2	Stillwater Muskogee
Newton, R. C. Nicholson, Patti Nickell, Ethel	Special	1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga
Newton, R. C	Sec	1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl	Special S-1 Bus. S-Bus.	1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga
Newton, R. C	Sec. SS-S-Special Bus. SS-Bus. SS-Bus. SS-E, E, Fr. SS-S-SS-SS-SPECIAL SS-S-E, E, Fr. SS-SS-SS-SS-SS-SS-SS-SS-SS-SS-SS-SS-SS-	1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde	Special   1   1   1   1   1   1   1   1   1	1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater
Nash, B. M. Nash, Orman Nation, John G. Nault, Joe Neaves, Eunice Neerman, Katherine Nehrbass, Paul Nelson, B. B. Nelson, Okey Nelson, Edwin Nelson, Edwin Nelson, Edwin Nelson, Edwin Nelson, Edwin Nelson, Edwin Nelson, Gecil Netick, Joe Netherton, Cecil Netick, Joe Newberry, Calvin Newell, Rose Newborry, Calvin Newell, Rose Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde	Special 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro
Newton, R. C	Special Sspecial Special	1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro Arcadia
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde  Odor, Hesper E. Oldham, Rhodella	Special Sspecial Special	1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro Arcadia Stillwater
Newton, R. C	Special Specia	1-2 1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro Arcadia Stillwater Stillwater
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Oldnam, Lola	Sec. Special Bus. Special Bus. Special	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel	Sec. 5 Special 8 Special 8 Special 8 Special 5	1-2 1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro Arcadia Stillwater Stillwater Stillwater Stillwater Muskogee
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd	Sec.   S-Sec.   S-Sec	1-2 1-2 1-2 1-2 1-2 1-2 1-2 1-2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro Arcadia Stillwater Stillwater Stillwater Stillwater Muskogee El Reno
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde  Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd Oliver, Hugh	Sec. S-S-Special Bus. S-Bus. S	-2  -2  -2  -2  -2  -2  -2  -2  -2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater Muskogee El Reno Guthrie
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd Oliver, Hugh Olmstead, Nora	Sec. Special Bus. Special Bus. Selvant Special	-2  -2  -2  -2  -2  -2  -2  -2  -2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater Stillwater Guthvie El Reno Guthrie Ripley
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd Oliver, Hugh Olmstead, Nora	Sec.   S-Sec.   S-Sec	-2  -2  -2  -2  -2  -2  -2  -2  -2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater Stillwater Guthrie Ripley Stillwater
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd Oliver, Hugh Olmstead, Nora Olmstead, Audrey F. Olmstead, Eva	Sec. Special Bus. Special Bus. Special Spus. Special S	-2  -2  -2  -2  -2  -2  -2  -2  -2  -2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater Muskogee El Reno Guthrie Ripley Stillwater Ripley
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde  Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd Oliver, Hugh Olmstead, Nora Oimstead, Audrey F. Olmstead, Eva Ori, Don M.	Sec. Special Bus. Bus. Special Sus. Bus. Special Speci	-2  -2  -2  -2  -2  -2  -2  -2  -2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater Stillwater Guthrie Ripley Stillwater Ripley Earlsboro
Newton, R. C. Nicholson, Patti Nickell, Ethel Nixon, Mrs. Gladys Nixon, Carl Noel, Clyde Odor, Hesper E. Oldham, Rhodella Oldham, Roy Oldham, Lola Olentine, Hazel Oler, Loyd Oliver, Hugh Olmstead, Nora Oimstead, Nora Oimstead, Evaluation of Markey Ori, Don M. Outhier, Virgil	Sec. Special Bus. Special Bus. Special Spus. Special S	-2  -2  -2  -2  -2  -2  -2  -2  -2  -2	Stillwater Muskogee Watonga Stillwater Stillwater Hydro  Arcadia Stillwater Stillwater Stillwater Stillwater Guthrie Ripley Stillwater Ripley Earlsboro Homestead
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Pearce, Carl		
	Sec	Agra
Pecknam, Robert	Bus 1-2	Blackwell
Pager T R	C and M Fr 1	Cushing
Data Data	TT P P	Cushing
Pelphrey, Kuth	H. E., Fr 1-2	Shawnee
Pennington, Chas	Sec. N 2	Ada
Panny Inmet	Agri Fr 10	Glencoe
Telliny, James	Agile, Flammen 1-2	Glencoe
Pepin, Frank W	Bus 1-2	Stillwater
Percival Chas	M E. Fr 1.2	Bay City, Texas Bay City, Texas
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Percival, Kathryn	H. E., Soph 55-1-2	Bay City, Texas
Percy. E. F.	Agri., Soph 1-2	Thomas
Domina Alice	Con 1	Pawnee
reffine, Alice	500	rawnee
Persing, Wilbur	Sec 1-2	Coyle
Peters, James M	Bus. 1-2	Pawhuska
Determine Death	Dan 1	T11
Feterson, Ruth	Dus 1	Ingersoll
Pfaff, B. A	Bus 1-2	Okeene
Phillips Christ	Rue 1	Stillwater
Tillings, Chilst	Dus 1	Stillwater
Pierce, Esther	Bus 1-2	Stillwater
Pierce, Verna	Bus 1	Stillwater
Diagram Walan	Soc 1.0	Pond Creek Pond Creek Pond Creek
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Pierson, Roy E	E. E., Fr 1-2	Pond Creek
Piercon Marie	Edu Sonh SS-1-3	Pond Creek
Titleon Idaile	C C 1 C	C. 11
Puzer, Florence	Sec 5 5-1-2	Stillwater
Pitzer, Mary	Sec	Stillwater
Doffenberger May	Dago 1 /	Stillwater
Toffenberger, Max	Dus 1-2	Sullwater
Pollard, Joe	BusS S-1-2	Stillwater
Poole Grace	Edu Sr 10	Stillwater
Toole, Glace	Duui, DI 1-2	Stillwatel
Popplewell, Aileene	Bus 1	Stillwater Stillwater
Porter Roy	Edu. Ir SS1.3	Stillwater
TOILE, AUY	D C	Dilliwater
Porter, Judson	P. C. A 1-2	Blanket, Texas Leonard
Porter, W. A	Engr., Fr. 1	Leonard
Dostan Diagonat	Consist 1	Leonard
FUTIEF, FICASAIII	Special	Leonard
Porterfield, Chas, W	Sec 1-2	New Wilson Headrick
Potte Clay	Acres En 10	Handrick
1 Otto, Clay	Agili, Fl.	Cotta
Potter, Hulda	H. E., Soph S-1-2	Stillwater
Potter Cecil	C. and M. Fr 1	Stillwater
Dam-II Danis	H E Carl CC10	Caillanatan
Powell, Bessie	H. E., Soph 55-1-2	Stillwater
Powell, J. I.	M. E., SrS S-1-2	Stillwater Thomas
Powers Minnie	Sec 1.2	Thomas
Towers, Milling	DCC	Thomas
Prater, Richard	M. E., Fr	Hobart
Price Fred	S and T. Fr 1	El Reno
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Prigmore, Millard	Sec1-2	Burbank
Prollock, William	P. C. A N 2	Orlando
Decreat Lucy	Ed. E- CC12	Stillwater
Flowaiit, Lucy	Euu., FI 5 5-1-2	Sullwater
Putman, O. L.	Agri., Soph 1-2	Woodford
Putman, O. L.	Agri., Soph 1-2	Woodford Oklahoma City
Putman, O. I. Putney, E. M.	Agri., Soph	Woodford Oklahoma City
Putman, O. L. Putney, E. M.	Agri., Soph	Woodford Oklahoma City
Putman, O. L. Putney, E. M. Rabon, Illowynne	Agri., Soph	Woodford Oklahoma City Stigler
Putman, O. L. Putney, E. M. Rabon, Illowynne	Agri., Soph	Woodford Oklahoma City Stigler
Pearce, Carl Peckham, Robert Peery, J. B. Pelphrey, Ruth Pennington, Chas. Penny, James Pepin, Frank W. Percival, Chas. Percival, Chas. Percival, Kathryn Percy, E. F. Perrine, Alice Persing, Wilbur Peters, James M Peterson, Ruth Pfaff, B. A. Phillips, Christ Pierce, Esther Pierce, Verna Pierson, Roy E. Pierson Marie Pitzer, Mary Poffenberger, Max Pollard, Joe Poole, Grace Popplewell, 'Aileene Porter, Roy Porter, Judson Porter, Undson Porter, W. A. Porter, Pleasant Porterfield, Chas. W Potts, Clay Potter, Hulda Potter, Cecil Powell, Bessie Powell, J. Powers, Minnie Prater, Richard Price, Fred Prigmore, Millard Prollock, William Prowant, Lucy Putman, O. L Putney, E. M. Rabon, Illowynne Ragland, Raymond	Agri., Soph	Woodford Oklahoma City Stigler El Reno
Putman, O. L. Putney, E. M. Rabon, Illowynne Ragland, Raymond Randall, Paul	Agri., Soph	Woodford Oklahoma City  Stigler El Reno Blackwell
Putman, O. L. Putney, E. M	Agri., Soph	Woodford Oklahoma City  Stigler El Reno Blackwell Clinton
Putman, O. L. Putney, E. M. Rabon, Illowynne Ragland, Raymond Randall, Paul Randol, Alberta	Agri, Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton
Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater
Putman, O. L. Putney, E. M.  Rabon, Illowynne Ragland, Raymond Randall, Paul Randol, Alberta Randolph, Robert Ranes, G. O.	Agri, Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton
Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pand Craek
Putman, O. L. Putney, E. M.  Rabon, Illowynne Ragland, Raymond Randall, Paul Randol, Alberta Randolph, Robert Ranes, G. O. Ransom, Harry	Agri, Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek
Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater
Putman, O. L. Putney, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater
Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hawward
Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward
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Putman, O. L. Putmey, E. M	Agri., Soph	Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno
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Putman, O. L. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C and M., Fr. 1-2 Bus. 1-2 Sec. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S S-1-2 H. E., Sr. 1-2 Sec. 2 Sec. 2 Sec. 1-2	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Ryan
Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City  Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Meno Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Ryan Brooklyn, New York
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Ryan Brooklyn, New York
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Putman, O. L. Putman, O. L. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C and M., Fr. 1-2 Bus. 1-2 Sec. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Sr. 1-2 Sec. 2 Sec. 1-2	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Muston Blanchard Stillwater Mustang Stillwater Mustang Stillwater
Putman, O. L. Putman, O. L. Putmey, E. M	Agri., Soph	Woodford Oklahoma City  Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Heno Stillwater Stillwater Stillwater Stillwater Ryan Brooklyn, New York Blanchard Stillwater Mustang Stillwater Mustang Stillwater Garber Ponca
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C. and M., Fr. 1-2 Bus. 1-2 Bus. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Fr. 1-2 Sec. 2 Sec. 1-2 Sec.	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Mustang Stillwater Hobart
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph	Woodford Oklahoma City  Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Mustang Stillwater Garber Ponca Hobart Stillwater
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C. and M., Fr. 1-2 Bus. 1-2 Sec. 1-2 H. E., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Sr. 1-2 Sec. 2 Sec. 1-2 Sec	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Pond Creek Stillwater Lawton Pond Creek Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Mustang Stillwater
Putman, O. L. Putman, O. L. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C and M., Fr. 1-2 Bus. 1-2 Sec. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Sr. 1-2 Sec. 1-2 Bus. 1-2 Sec. 1-2 Sec. 1-2 Bus. 1-2 Sec. 1-2 Sec. 1-2 Sec. 1-2 Bus. 1-2 Sec. 1-2	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Mustang Stillwater Garber Ponca Hobart Stillwater Oklahoma City
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C. and M., Fr. 1-2 Bus. 1-2 Sec. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Sc. 1-2 Sec. 2 Sec. 1-2 Bus. 1-2 Sec. 1-2	Stigler El Reno Blackwell Clinton Pond Creek Stillwater Lawton Pond Creek Stillwater Hayward Hayward Meno Stillwater Mustang Stillwater Garber Ponca Hobart Stillwater Oklahoma City File City
Putman, O. L. Putman, O. L. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C and M., Fr. 1-2 Sec. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Sr. 1-2 Sec. 2 Sec. 1-2	Woodford Oklahoma City Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Muston Blanchard Stillwater Mustang Stillwater Garber Ponca Hobart Stillwater Oklahoma Elk City
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph	Woodford Oklahoma City  Stigler El Reno Blackwell Clinton Pond Creek Stillwater Lawton Pond Creek Stillwater Hayward Hayward Meno Stillwater Stillwater Ryan Brooklyn, New York Blanchard Stillwater Mustang Stillwater Garber Ponca Hobart Stillwater Oklahoma City Elk City
Putman, O. I. Putman, O. I. Putmey, E. M	Agri., Soph. 1-2 Agri., Jr. 1-2 Edu., Fr. 1-2 Sec. 1-2 C. and M., Fr. 1-2 Bus. 1-2 Sec. 1-2 E. E., Soph 1-2 Agri., Sr. 1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Fr. S-1-2 H. E., Sr. 1-2 Sec. 2 Sec. 1-2 Sec.	Stigler El Reno Blackwell Clinton Stillwater Lawton Pond Creek Stillwater Stillwater Hayward Hayward Meno Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Stillwater Mustang Stillwater Mustang Stillwater

Richey, French Richter, P. L. Riederer, Florence Riley, Jessie Riley, Jessie Rinehart, Virgil Rinehart, Virgil Rinehart, Harry E. Roads, Irwin Roberts, Estelle Roberts, Walter Roberts, Paul Roberts, Jessie Roberts, Perry Roberts, Otto Robertson, Philo Robertson, Philo Robertson, Philo Robertson, Reuben Robertson, Bryan W. Robertson, Bess Robinson, Geo. L.		
Richev. French	P. C. A 1-2	Claremore
Richter, P. L.	Sec 1	Stillwater
Riederer, Florence	Bus S S-1-2	Stillwater
Riley, Jessie	Sec 1-2	Okesa
Riley, Mabel	Bus N 2	Stillwater
Rinehart, Virgil	Agri., Sr 1-2	Ramona
Rinehart, Harry E	E. E., Fr 1-2	Guthrie Waukomis
Roads, Irwin	C. and M., Fr 1	Waukomis
Roberts, Edward L	Sec	Okmulgee
Roberts, Estelle	H. E., Fr 55-1-2	Stillwater
Roberts, Walter	Sec 1-2	McLoud
Roberts, Paul	Sec 1-2	Hollis
Pohorts Pours	D C A 12	Hollis
Paharta Otto	P C A 12	Stillwater
Pohortson Philo	Pue 9 9 1 2	Ctill water
Robertson Lola	Edu Fr S S-1-2	Ouinlan Stillwater Stillwater
Robertson Reuben	Arvi Fr SS-1-2	Stillwater
Robertson, Bryan W	Bus. 1-2	Stillwater
Robertson, Bess	Bus. 1-2	Stillwater
Robinson, Geo. L.	Bus. 1-2	Pauls Valley
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Pobinson Mrs G I.	Sec N 2	Stillwater
Pohincon Rev	Sec. 12	Muskogee
Robinson Maurice L.	Sec N 2	Hominy
Robinson Chas I	C and M Fr 1-2	Muskogee
Robinson Chas H	C and M Soph 1.2	Stillwater
Robinson Ethel	Sec. 1-2	Glencoe
Robinson, W. B	S. and L. Sr SS-1-2	Quaker City Ohio
Rockett Louis H.	Bus. 1-2	Quaker City, Ohio Wilburton
Rockey Nellie	H. E. Sr S S-1-2	Stillwater
Roddy Farl	Sec. 1-2	Fort Cobb
Roden, Roy Lee	C. and M. Fr 1-2	Wetumka
Rogers, Glenn	C. E., Fr. 1-2	Snyder
Rohrbaugh, Paul	Sec. 1-2	Boynton
Roof, Blanche	Sec	Tryon
Roose, Ruth	H. E., Soph 1-2	Chandler
Rosenbaum, Wm	Agri., Soph 2	New York City, N.
Ross, Geo. S	C. and M., Soph 1-2	Shawnee
Rouse, Elva	Sec 1-2	Pleasant Valley Pleasant Valley
Rouse, Claude	C. and M., rr 1-2	Pleasant Valley
Rowland, Whitney	Bus 1	Ochelata
Rowland, Lewis H	Bus 1	Shawnee
Rowland, Rex	P. C. A 1-2	Piedmont
Ruby, Ralph	P. C. A 1-2	Gageby, exas
Rusher, Harold	Sec 1-2	Yale
Rusher, Helen	Sec. 1-2	Yale
Russell, Margaret	H. E., Sr 1-2	Oklahoma City
Russell, Chas	Sec	Watts
Rutter, Earl	Sec 1-2	Stillwater
Robinson, Geo. L.  Robinson, Mrs. G. L. Robinson, Maurice L. Robinson, Chas J. Robinson, Chas J. Robinson, Ethel Robinson, Ethel Robinson, W. B. Rockett, Louis H. Rockey, Nellie Roddy, Earl Roden, Roy Lee Rogers, Glenn Rohrbaugh, Paul Roof, Blanche Roo, Ruth Rosenbaum, Wm Ross, Geo. S. Rouse, Claude Rowland, Whitney Rowland, Lewis H. Rowland, Lewis H. Rowland, Rex Ruby, Ralph Rusher, Harold Rusher, Harold Rusher, Harold Russell, Margaret Russell, Margaret Russell, Chas Rutter, Earl Ryan, Dana Sadlo, Eddie	Sec 1-2	Maramec
C. 11. P.111.	E E E. N. O.	D
Sadio, Eddie	A F E CC12	Prague
Sale, Claude	A. E., II	Snawnee Shawnee
Sanguin ( lyde	Rus SS1	Hugo
Schacher Clara	Sec 1-2	Stillwater
Schacher Tames	Rue 1.2	Stillwater
Schnurg Angie	H. E. Ir 1-2	Orlando
Schooler, Ollie	Sec. 1-2	Glencoe
Schooler, George	Vet. Soph SS-1-2	Giencoe
Schooler, Bessie	SecS S-1-2	Stillwater
Schwab, Robert	S. and L., Fr N 1	Tonkawa
Scott, James Herman	C. E., SrS S-1-2	General Yale
Scott, Richard E	Bus 1-2	Yale
Scrivner, James	E. E., Soph 2	Maysville
Scroggs, Wm. A	C. and M., Soph 1	Stillwater
Scroggs, Ada	Edu., Soph 1-2	Stillwater
Searcy, Carl	Sec 1-2	Yale
Self, Wm. B	Bus N 2	Poteau
Selph, Layla	II. E., Jr 1-2	Stillwater
Settergreen, Lottie	H. E., Fr 1-2	Lamont
Sewell, Raymond	Sec 1-2	Stillwater
Sexauer, Genevieve	Bus. 1-2	Guthrie Guthrie
Sharp, Eugene	C and M Fe	Trenton
Ryan, Dana  Sadlo, Eddie Sale, Claude Sale, Claude Sale, Leonard Sanguin, Clyde Schacher, Clara Schacher, James Schnurr, Angie Schooler, George Schooler, Georg	E E E E 12	Wewoka
Changed Puth	Pus S S 1.2	Stillwater

Y.

Sherburne, John A	Edu., Fr S S-	1-2	Stillwater
Sherburne, Wm. R.	BusS S-	1-2	Stillwater
Sharman Clude	Sec	1	Mulhall
Sherman, Clyde	C	4	
Sherman, Ola	Sec	1	Mulhall
Sherrard, Olive	H. E., Fr	1-2	Centerville, Iowa
Sherwood E. C.	Agri. Fr	1-2	Lomax, Illinois
Chields William	C and M Fr	1	Calumat
Shields, william	C. and M., Fr	1	Calumet
Shiller, H. H.	M. E., SrS S-	1-2	Stillwater
Chinn F H	Agri Sr	1.2	Russellville, Arkansa
Cit i E	E E E.	1 2	
Shirley, Emory	E. E., Fr	1-4	Gage
Shiry, Beulah	Sec	1-2	Shattuck
Short Vernon	Sec	1	Guthrie
Short, vernon	C.	* n	Di " m
Shurtz, Chillord	Sec	1-2	Blessing, Texas Brooklyn, New York
Siegel, Eli	Vet., Fr	1-2	Brooklyn, New York
Signinger Leons	Edu Sonh	1-2	Stillwater
Sieginger, Leona	C. Dopin	1 2	C+'11
Simmons, Marie	Sec	1-2	Stillwater
Sims. Elsie	Sec	1-2	Arnett
Cleinner Edwin Ray	Edu Sonh	1.2	Stillwater
Ct. D. Ties	A C1	1 2	Stillwater Billings
Skinner, Ray Ellas	Argi., Sopn	1-2	Billings
Sloan, Nelle	Special	1	Pawnee
Sitter Riley	F F Sonh	1-2	Blackwell
Sitter, Riley	D. 12., Sopii	1 0	
Smart, Faye	Bus	1-2	Stillwater
Smethers, Rose	BusS S-	1	Stillwater
Conith T D	PCA	1.2	Geary
Sillitil, J. R.	1. C. A	1 0	Tall
Smith, Lela	Sec	1-2	Loveland
Smith T. M.	Sec.	1-2	Loveland
Carith E D	Acri En	1 2	Little
Smith, E. I.	Agri., Fi	1-6	
Smith, W. C	Agri., Soph	1-2	Omega
Smith Elmer	Sec	1-2	Sapulpa
C. ish Chan M	17-4 T-	1 2	Anacha
Smith, Chas. M	vet., Fr	1-4	Араспе
Smith. Walter	Edu., Fr	1-2	Apache Vici
Smith Arthur Lee	C and M Fr	1-2	Edmond
Smith, Aithui Lee	C. and M., Fl	1-2	D
Smith, G. A	Agri., Fr	1-2	Prosper, Texas Stillwater
Smith. G. C.	Edu., Sr	1	Stillwater
Sandar Remi	Edu Sa SS.	1.2	Hayward
Snyder, Beryl	Edu., 51	1-7	TT 3
Snyder, Ivan	Sec	1	Hayward
Soule Field	Sec	1.2	Beggs
Caula Clautan	E E b	1 2	Nowata
Soule, Clayton	E. E., Fr	1-2	Nowata
Souter, Fairey	Agri., Fr	1	Magnolia, Arkansas Magnolia, Arkansas
Souter Netabel	H F Re	1.2	Magnolia Arkansas
Could, Itelabel	C T T	4 0	C
Southwick, Ivan A	C. E., Jr	1-4	Garber
Snangler, Mace	Edu., Soph	1-2	Frederick
Connelos Tel	E E E	1.2	Drumright
Spangler, 111	E. E., FI	1.0	Wantight
Spencer, Roby	E. E., Fr	1-2	Wynnewood
Spencer T. R	Agri Tr	1-2	Stillwater
Crises Verde	Sac Sac	1.2	Stillwater
Spicer, veida	566.	1-4	T
Spilman, Robert	P. C. A	1-2	Lockney, Texas
Springer P. A.	P. C. A	1-2	Pawnee
Caringer, E A	D C A	1 2	Pawnee
Springer, F. A	F. C. A	1-2	I awrice
Spurrier, Kara	H. E., Sr	1-2	Stillwater
Staedelin Maude	H E Sonh	1-2	Medford
Ct-ff1 T	D.	1 2	Stillwater
Stafford, Joe	Bus.	1-2	TT'11 1
Standefer, Catherine	H. E., Fr N	2	Hillsboro, Texas Prosper, Texas
Standifer M. L.	Vet Fr	1-2	Prosper, Texas
Stanfold Chas C	C	1.2	Fleetwood
Stanneld, Chas. C	77 B B	1 0	Stillwater
Stansbury, Floy	H. E., FrSS-	1-4	Stillwater
Stanton, Lettie	Sec	2	McAlester
Starke Leonard R	C and M Fr	1-2	Waynoka
Ctarre Dobart C	Can did Mi, I immini	1 2	Concho
Starr, Robert C	Sec	1-4	COLUM
Steele, Milan G	Sec	1	Whiteagle
Stenhens Hazel	Sec SS-	1-2	Stillwater
C. Tazer	0	4 2	Kendrick
Stevens, Frank	Sec	1-4	Kendiick
Stevens, Carl	M. E., Fr	1-2	Paris, Texas
Stoward F D	Arch Tr	1-2	Anadarko
Steward, E. D.	Alcil., Ji	1 0	Stillwater
Steward, Lunice	H. E., Fr 55-	1-4	Stillwater
Steward, Mrs. Una	H. E., Fr	1-2	Stillwater
Stockton Lela	Sec	1	Perkins
C4 - 1-4 D	C	1	Perkins
Stockton, Kena	Sec	1	Citilis
Stokesberry, Ruth	Sec	1-2	Stillwater
Stokesherry Lawrence	Agri Sonk	1-2	Stillwater Stillwater
Challes E	Agii., Supm	1 2	Wagoner
Stoklasa, Frank	Agri., Fr	1-2	Wagoner
		1-2	Chickasha
Stone, Shelley	E. E., Fr.,		
Stone, Shelley	E. E., Fr	1.2	Waurika
Stone, Shelley	E. E., Fr P. C. A	1-2	Waurika
Stone, Shelley Stout, Loy H Strickland, Essa	E. E., Fr P. C. A Sec	1-2 1	Orlando
Stone, Shelley Stout, Loy H Strickland, Essa Stringer, Henry	E. E., Fr P. C. A Sec.	1-2 1 1	Orlando Stillwater
Stone, Shelley Stout, Loy H Strickland, Essa Stringer, Henry Stringer, Walter	E. E., Fr	1-2 1 1 1-2	Orlando Stillwater
Stone, Shelley Stout, Loy H. Strickland, Essa Stringer, Henry Stringer, Walter	E. E., Fr	1-2 1 1 1-2	Orlando Stillwater Ochelata
Stone, Shelley Stout, Loy H. Strickland, Essa Stringer, Henry Stringer, Walter Strong, Arch	E. E., Fr	1-2 1 1 1-2 1	Orlando Stillwater Ochelata Blanchard
Stone, Shelley Stout, Loy H Strickland, Essa Stringer, Henry Stringer, Walter Strong, Arch Stubblefeld, E. E.	E. E., Fr	1-2 1 1 1-2 1 1-2	Orlando Stillwater Ochelata
Sherburne, John A. Sherburne, Wm. R. Sherman, Clyde Sherman, Ola Sherrard, Olive Sherwood, E. C. Shields, William Shiller, H. H. Shinn, E. H. Shirley, Emory Shiry, Beulah Short, Vernon Shurtz, Clifford Siegel, Eli Sieglinger, Leona Simmons, Marie Sims, Elsie Skinner, Edwin Ray Skinner, Edwin Ray Skinner, Ray Elias Sloan, Nelle Sitter, Riley Smart, Faye Smethers, Rose Smith, J. R. Smith, J. R. Smith, Lela Smith, J. M. Smith, W. C. Smith, Elmer Smith, Chas. M. Smith, Walter Smith, G. A. Smith, G. C. Snyder, Beryl Smyder, Ivan Soule, Field Soule, Field Soule, Field Soule, Field Soule, Field Southwick, Ivan Souler, Netabel Southwick, Ivan Souler, Netabel Southwick, Ivan Souler, Ray Spangler, Mace Spangler, Mace Spangler, Mace Spangler, Mace Spangler, Mace Spangler, Kara Stadelin, Maude Stafford, Joe Stander, Catherine Standifer, M. L. Stanfield, Chas. C. Stansbury, Floy Stanton, Lettie Starr, Robert C. Steele, Milan G. Stephens, Hazel Stevens, Carl Steward, E. D. Steward	E. E., Fr	1-2 1 1 1-2 1-2	Orlando Stillwater Ochelata Blanchard

m			
Sturgis, Alden Sudik, Harry Surtees, L. V. Swalley, Lucy Swim, Elmer E. Swim, Leslie Swim, Paul Swingle, Chas.	Sec	1	Darlington
Sudik, Harry	P. C. A	1-2	Moore
Surtees, L. V	Agri., Sr	1-2	Swedesboro, New Jersey
Swalley, Lucy	H. E., Soph	1-2	Newkirk
Swim, Elmer E	. Sec	1-2	Stillwater
Swim, Leslie	C. E., Soph	2	Stillwater Stillwater
Swim, Paul	M. E., SophS-S	1-2	Stillwater
Swingle, Chas	Bus.	1	Tryon
Divingacy Caldestination		-	119011
Tabashuisla I ouis	V-+ E-	1 2	C.1.1 D.IC.1
Tabachnick, Louis	vet., Fr	1-2	Goloskov, Pod-Gab,
m 1 35			Russia
Tabor, Mary	Sec S S-	1-2	Stillwater
Tabor, Paul	Sec	1-2	Stillwater Stillwater
Taylor, Clarence	SecS S-	1-2	Stillwater
Taylor, Arthur	Sec	1-2	Alfalfa
Taylor, Opal Mae	Edu., Fr	1-2	Bearden
Taylor, Walter	Sec.	1-2	El Reno
Terry Harry	F F Fr	1.2	Kingston
Terry Lee	Edu Fe	1-2	Springer
That Frank	C and M Fr	1 2	Springer Dallas, Texas Stillwater
Thom, Flank	El. E. CC	1-2	Dallas, Texas
Inomas, Fannie	Edu., Fr	1-2	Stillwater
Thomas, Martha	H. E., Sr 5 5-	1-2	Stillwater
Thomas, Harley	Agri., Soph	1-2	Stillwater
Thomas, E.pert	C. and M., Soph	1-2	Durham
Thompson, Stella	Sec	1-2	Ralston
Thompson, Henry	Edu., Fr	1-2	Ralston
Thornley Hohart	Sec	1	Coyle
Tiller Flmer	PCA	1-2	Innic
Tilton Helen	Edu Sooh SS	1 2	Janis Nardin
Tillon, ricien	A. Soph	1-2	Nardin
Tilton, A. G	Agri., Fr	1-2	Nardin
Tilton, Richard	Agri., Soph	1-2	Nardin
Tiner, Floyd	Sec	2	Ripley
Tinker, N. A	Special	1	Pawhuska
Titus, Charles	E. E., Fr	1-2	Ingersoll
Tolleson, Mary L.	SecS S-	1-2	Stillwater
Tolleson T. W. Ir	C and M Fr SS.	1	Stillwater Stillwater
Towner Irone	Rue	1.2	Skedee
Towner Pord	Due,	1 2	Clarder
Towner, Doyd	A: Ta	1 0	Skedee
Trekell, Lester	Agri., Fr	1-4	Hunter
Trekell, Edna	H. E., Jr	1-2	Hunter
Tripp, Thomas A	Sec	1-2	Cleora
Trumbly, Paul	Bus	1-2	Oklahoma City
Tucker, Andrew	SecS S-	1-2	Stillwater
Tucker, Elsie	SpecialS S-	1-2	Bridgeport
Tucker, Bertha	SecS S-	1-2	Bridgeport
Turner, M. R.	P. C. A	1	Sayre
Turner Clifford B	B119.	1	Davis
Turner Fred	Sec	1-2	Kendrick
Turner Annie Deed	E4. C- CC	1 2	
Turner, Hine I carr	Edd., St	1 2	Scottsville, Kentucky
Turner, flerscher	Sec	1.2	Scottsville, Kentucky
Tyler, Dola	Sec	1-2	Stillwater Stillwater
Tyler, Mary	Sec	1-2	Stillwater
Tyler, Justus	Sec	1	Edmond
Tyrrell, Geo. W	Sec	1-2	Wilburton
Tabachnick, Louis  Tabor, Mary Tabor, Paul Taylor, Clarence Taylor, Opal Mae Taylor, Opal Mae Taylor, Walter Terry, Harry Terry, Lee Tholl, Frank Thomas, Fannie Thomas, Martha Thomas, Harley Thompson, Stella Thompson, Stella Thompson, Henry Thornley, Hobart Tiller, Elmer Tilton, Helen Tilton, A. G. Tilton, Richard Tiner, Floyd Tinker, N. A. Titus, Charles Tolleson, Mary L. Tolleson, J. W. Jr. Towner, Irene Trowner, Irene Trowner, Irene Trekell, Edna Tripp, Thomas A Trumbly, Paul Tucker, Andrew Tucker, Elsie Tucker, Bertha Turner, M. R Turner, Clifford B Turner, Herschel Tyler, Dola Tyler, Mary Tyler, Justus Tyrrell, Geo. W  Van Arsdell, Chas Van Buskirk, Halcolm Varnum, Joseph E Vermillion, Evelyn Vermillion, Evelyn Vermillion, Ruth Vermillion, Carrie Vincent, Glenn G Voise, Henry F Voyles, Carl Voyles, Carl	_		
Van Arsdell, Chas	Sec	1-2	Orlando
Van Buskirk, Halcolm	Sec	1-2	Oklahoma City
Varnum, Joseph E	C. and M., Fr	1-2	Shawnee
Vermillion Evelyn	Sec	1-2	Stillwater
Vermillion Ruth	H F Ie	1-2	Stillwater
Vermillion Comic	See See	1 2	Stillwater
Verminion, Carrie	D	1 2	Ctillto-
Vincent, Brooks	Bus.	1-4	Stillwater
Vincent, Glenn G	S. and L., Fr	1-2	Stillwater
Vineyard, Rebecca	Sec N	2	Newby
Vitek, Albina	Bus	1-2	Stillwater
Voise, Henry F	Bus	1-2	Perry
Vovles, Carl	Sec	1-2	Drumright
Voyles, Clifford	Bus.	1-2	Drumright
vojico, omizoia mimi	2,000		2.4
Wade A F	Agri Sonh	1-2	Douglas ·
Waldrana Peatrice	Edu Fe	1-2	Doddridge, Arkansas
Waldroup, Deatrice	Due CC	1 2	Ctillwoter
warker, Rosetta	M F E-	1 2	Stillwater
waiker, Morgan	M. E., FT	1-2	Fleetwood
Walker, F. R.	300	1-2	Hobart
	0		
Wallace, John C	Sec	1-2	Oklahoma City
Wallace, Mary	Sec. Special	l-2 l-2	Stillwater
Wallace, Mary	Sec. Special Agri., Fr	1-2 1-2 2	Stillwater Stillwater
Wallace, John C	Agri., Soph	1-2 1-2 2	Stillwater

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Wallis, Neoma	Edu., Fr	1-2	Stillwater
Wallis, Khea Wm	. Sec N	12	Oklahoma City
walsh, Claude	Sec. Sec. S	-1-2	Los Angeles, California
walters, Joe	Agri., Sopn	1-2	Stillwater
ware, Jim	Dus	1-2	Stillwater
Warliels Loston	. Dus,	1-2	Stillwater
Watson Asyna B	Soc	1 2	Kenton
Water Fibertine	Sec	1-2	Stillwater
Watson triens	Fnor Fr	1	Mutual
Weatherford Curtis	Sec.	1-2	Stillwater
Weaver Walter	Sec	1-2	Gilmore
Webb Robert T	F.F. Ir	1-2	Stillwater
Webb Nix	M. E. Ir	1-2	Stillwater Tipton
Weber Emma	Sec CC	1.2	Dewey
Weiss Mary	H F. Fr	1.2	Harrah
Weiss Enid	Sec.	1-2	Harrah
Welborn, Clyde	Sec.	1-2	Coalgate
Welch, Lee	S. and L. Fr	1	Antlers
Welch, Don	C. and M., Fr	1	Albion
Wells, Dean	Bus. N	2	Stillwater
Wertz, Leo B	C. and M., Fr	1-2	Purcell
Wesner, Chas	Sec.	1-2	Purcell Foss
West, W. E	Agri., Sr	1-2	Warner
West, E. M.	Agri. Fr.	1-2	Carney
Westfall, August	Sec.	1-2	Okeene
Wheeler, Maybelle	H. E., Fr.	1-2	Blackwell
Wheeler, Commodore	Agri., Sr	1-2	Blackwell
Wheeler, Pearl	H. E. Fr. S.S.	1-2	Stillwater
Wheeler, Blanche	Sec.	1-2	Stillwater
Wheeler, J. B	Sec	1	Ardmore
Whillock, Clyde	Sec	1-2	Stillwater
Whillock, Buena	Edu., SrS S	1-2	Stillwater
Whipple, J. B	Edu., Fr	1-2	Stillwater
Whipple, Lee	P. C. A N	2	Waynoka
Whisler, Evart	P. C. A	1-2	Watonga
Whistler, John M	Sec	1-2	Boynton
Whistler, Jessie	Sec	1-2	Boynton
Whistler, E. W	P. C. A	1-2	Boynton Stillwater
Whitaker, Florence	Sec	1-2	Stillwater
Whitaker, Helen	Sec	1-2	Stillwater
White, Oscar A	C. and M., Soph	1-2	Sulphur
White, Grace B	Bus	1-2	Stillwater
White, Lee	P. C. A	1-2	Stamford, Texas
White, Bob	Agri., Fr	1-2	Vinita
White, Milford	Sec	1-2	Vinita
Whittenberg, Geo	C. E., Jr	2	Stillwater
Whyte, Paulyte	Bus N	2	Okemah
Wilber, Philip A	Arch., Jr	1-2	Guthrie
Wiley, John M	E. E., Fr	1-2	Arkansas City, Kansas
Wiley, Glenn	Sec	1	Stillwater
Wiley, Ross L	Agri., Fr	1-2	Stillwater
Wilkins, Robert B	Agri., Fr	1-2	Stillwater
Williams, Jennie	Bus	1-2	Mehan
Williams, Florence	Sec	1-2	Stillwater
Williams, Julian	Agri., Fr	1-2	Tishomingo
Williams, Frances E	Bus	1	Stillwater Sweetwater
Willis, Rushing	Sec	1	Sweetwater
Willits, Depurda	Sec.	1-2	Paoli
Wilson, Joseph M	M. E., Sr	1-2	Stillwater
Wilson, Barbara	Sec. SS-	1-2	Cushing
Wilson, David	C. and M., Soph	1-2	Shawnee
Wilson, Wilber	C. and M., Soph	1-2	Blackwell
Wilson, W. A.	C. and M., Fr	1-2	Yellville, Arkansas
Wilson, Lillian E	S. and L., SophSS	1-2	Stillwater
Wilson, Eva	SecS S-	1-2	Pemeta
wilson, Upal	Bus	1-2	Stillwater
Wilson, Hester Mary	H. E., Sopn	1-2	Hydro
Wilson, Hubert	C and M Seeh	1-2	Homestead
Wilson, John N.	C. and M., Sopn	1-2	Shawnee
Wintedman Mandalan	Ed. T.	1-2	Stillwater
Winkelman, Magdalen	Edu., Jr	1-2	Chandler
Winn, Annaliza	H. E., Sr	1-2	Stillwater Stratford
Winn, Farron	Sec N	1	Whiteagle
Winters Tossia	DUS, A	1.2	Choteau
Wallis, Neoma Wallis, Rhea Wm. Walsh, Claude Walters, Joe Ware, Jim Ware, Jim Ware, Jim Ware, Tim Warlick, Lester Watson, Aenne B. Watson, Elbertine Watson, Delentine Watson, John Weatherford, Curtis Weaver, Walter Webb, Robert T. Webb, Nix Weber, Emma Weiss, Enid Welborn, Clyde Welch, Lee Welch, Lee Welch, Lee Welch, Don Wells, Dean Wertz, Leo B. Wesner, Chas. West, E. M. Westfall, August Wheeler, Maybelle Wheeler, J. B. Whillock, Clyde Whillock, Buena Whipple, J. B. Whister, Jessie Whister, Jessie Whister, Fevart Whister, Jessie Whister, Forence Whitaker, Helen White, Grace B. White, Miford White, Miford White, Misson, David Whison, Barbara Wilson, David Wilson, John N. Wimmer, Alice Winters, M. R. Witters, Addie	Special	1 -2	Choteau
With an Addin	Special	1-2	Stillwater

Witte, Herald         E. E., Fr.         1-2           Wittich, V. R.         C. and M., Fr.         1-2           Wofford, Kyle         Bus.         1-2           Wohlbrandt, P. H.         C. E., Fr.         1-2           Wolff, J. P.         S. and L., Fr.         -12           Womble, Murray R.         C. E., Soph.         1           Wood, Beulah         Bus.         1-2           Wood, Sallie         H. E., Soph.         S S-1-2           Woodruff, Wayne         E. E., Jr.         1-2           Woodruff, Cecil         P. C. A.         1-2           Woods, Ed         S. and L., Soph.         S S-1-2           Woods, Roy S.         Sec.         1-2           Wordson, Mortimer         Agri., Sr.         1-2           Wortman, Leo         Agri., Jr.         1-2           Wortman, Mrs. Leo         Bus.         1-2           Wright, Albert Lee         Bus.         S S-1-2           Wright, Eva         H. E., Fr.         1-2           Wright, Eva         H. E., Fr.         1-2           Wright, Noah F         Edu., Soph.         1-2           Wyant, Lynton         M. E. Sr.         S S-1-2	Cushing Stillwater Bearden Custer Waukomis Tulsa Stillwater Hillsboro, Texas Kingman, Kansas Anadarko Stillwater Randlett Walters Lysander, New York Stillwater Stillwater Stillwater Stillwater Stillwater Cashion Fairview
Yeargin, Grace         Sec.         S S-1-2           Young, John         Sec.         1-2           Young, Robert Eugene         E. E., Fr.         1-2           Young, Verle         Edu., Soph         1-2           Young, Tressie         Edu., Soph         1-2           Young, Rosa         Sec.         S S-1-2	Stillwater Stillwater Aransas Pass, Texas Stillwater Stillwater Stillwater
Zalabak, William       Bus.       1-2         Zears, Chas.       C. and M., Fr.       1         Zimmerman, Hyme       Bus.       1-2	Kingfisher Sandoval, Illinois Antlers

## SUMMER NORMAL STUDENTS

Adams, Kathryn, Stillwater Adams, Carrie, Wynona Adler, Bert, Maramec

Adler, Bert, Maramec
Baker, Myrtle, Cushing
Baker, Ora, Stillwater
Balch, Caivin, Carney
Balch, Mrs. Nancy, Carney
Barnes, Ada, Stillwater
Barney, Alice, Stillwater
Barney, Alice, Stillwater
Bausell, Jewell, Pawnee
Bassler, Emma, Stillwater
Beck, Paul V., Hunter
Bellis, Rex, Stillwater
Bentley, Louise, Stillwater
Bentley, Louise, Stillwater
Biggs, Rena, Perry
Bilyeu, R. I., Stillwater
Blackwood, G. H., Hominy
Bloomer, Emerson, Seiling
Bonar, Mollie, Stillwater

Campbell, Lulu, Drumright
Cantwell, Christine, Stillwater
Caplena, Mable, Wynona
Carpenter, Edward, Bridgeport
Casey, Ada, Mulha!!
Castleberry, Gus, Viola, Arkansas
Chesher, Willie, Devol
Clausen, Elsie, Stillwater
Clausen, Jessie. Stillwater
Collins, Blanche, Stillwater
Collins, Mabel, Stillwater
Copley, Irl R., Glencoe

Darlow, Margaret, Stillwater Dawson, Sidney, Chickasha Dawson, Kathleen, Chickasha DeBois, Virginia, Stillwater DeBolt, Annettie, Guthrie DeBord, Grace, Stillwater Dillman, Frank, Ripley

Earp, Ona, Stroud Ellsworth, Grace, Independence, Kansas

Fair, Jessie, Idabel

Anderson, Jennie, Muskogee Annett, Marie, Cleveland

Bonar, Hallie, Stillwater Boyce, Flora, Stillwater Bradford, Florence, Cushing Bradley, Chas. E., Glencoe Brane, Opal, Beggs Brink, Atha, Cushing Brock, Leola, Quay Brown, Clara, Cushing Bulling, Marie, Orlando Bullock, Nellie, Stillwater Bundy, Eva, Pawhuska Bunyard, C. L., Tyrone Bunyard, D. I., Stillwater Burke, Clara, Stillwater, Burnham, Ruth, Stillwater Burnham, Ruth, Stillwater

Corbin, D. C., Stillwater
Correll, V. I., Stillwater
Correll, Ellen, Stillwater
Cox, Burl, Stillwater
Coyner, Amelia, McAlester
Crawford, Mrs. C. W., Mountain View
Crossley, Rosa, Luther
Cummings, Dellu, Ripley
Cummings, S. N., Ripley
Cummings, Maxie, Goodwell
Cunyus, Paul, Shawnee

Ditto, Edna, Avery Dorsett, R. D., Lamont Dougherty, Leta, Avery Downey, Viola, Loyle Downing, R. E., Stillwater Downing, Grace, Stillwater Dutcher, Mary, Mangum

Estes, Van Emmet, Headrick

Fellows, Leland, Stillwater

First, Fern, Stillwater Fisher, Irene, Stillwater Fisher, Mary, Stillwater Flower, Agnes, Perkins

Gammage, Lucy, Stillwater Garlock, Bertha, Vici Garrett, B. H., Sallisaw Garst, Herman, Claremore Gelder, Geo., Jr., Stillwater Germany, Chas., Stillwater Gertsen, Pearl, Stroud Gibbs, Vestal, Agra Gilbert, Edith, Glencoe

Haddock, Flora, Pawnee Hall, M. J., Holdenville Hall, M. J., Holdenville Hall, Josephine, Avery Hall, Meda, Vinita Hamlin, Esther, Stillwater Harnden, E. E., Stillwater Harnden, M. G., Stillwater Harris, Elsie, Cushing Hatch, Hazel, Enid Hayes, G. Gr., Glencoe Hays, Clara, Okarche Hesser, John, Glecoe Hesser, Edith, Glencoe Hesser, Mildred, Glencoe Heston, Lucile, Stillwater Hickman, Elmer, Stillwater Hickman, Bessie, Perkins

Isenberg, Gilbert, Stillwater

Jack, Rex, Stillwater Jack, Mrs. Rex, Stillwater Jester, Louise, Stillwater Johnson, Tekla, Stillwater

Keegan, H. L., Shawnee Kennedy, Mabel, Morrison Kennon, Mrs. Clara, Stillwater Kent, Mrs. F. C., Stillwater

Lahman, Ruth, Stillwater Lamar, J. S., Stillwater Lamb, Mattie, Stillwater Lamb, Jennette, Cleveland Lancaster, Grady, Yale Lauderdale, Ruby, Stillwater Leigh, Blanche, Glencoe Leitch, Myrtle, Tahlaquah Leitch, Jessie, Sparks

McAnally, Ora, Coyle McCarrel, Mrs. Virgie, Stillwater McCarrel, Fred, Stillwater McConnell, Marjorie, Kansas City, Kansas McCroskey, Ethel, Yale

Mahaffey, Nellie, Devol Maloy, Retta, Mangum Malernee, Alfa, Tryon Mann, Alta, Perkins Marble, Mable, Stillwater Marker, Walter, Orlando Markwell, Nettie, Stillwater Markwell, Ethel Stillwater Martin, Esther, Stillwater Martin, Esther, Stillwater Mascho, Inez, Chandler Mathis, Ora, Perry Mauzey, Gladys, Glencoe

Naly, Edna, Cleveland Nauman, Marie, Cushing Nelson, Hawthorne, Stillwater Nelson, Vinita, Stillwater Nelson, Gordon, Stillwater Newman, Leone, Belle Plaine, Kansas Francis, Kenworthy, Stillwater Franklin, Chester, Grimes Freeman, Ray F., Guthrie French, Laura, Tyrone

Gillmore, Blanche, Lone Wolf Gillum, J. L., Minco Gordon, May, Stillwater Gould, Brenda, Stillwater Gray, Mina, May Green, Thomas F., Stillwater Green, Eva, Dewar Guffy, Gladys, Cleveland Guinn, Opal, Stillwater

Hiet, Sadie, Stillwater
Hilton, Nell, Briartown
Hinkle, Bess, Stillwater
Hinsdale, Viola, Ralston
Hoblit, Mrs. A., Stillwater
Hodge, Ruby, Perry
Hogan, Earl, Stillwater
Hogan, Stella, Stillwater
Hogg, Lester, Hominy
Hoggatt, Nellie, Stillwater
Holbrook, Ruth, Morris
Horner, John, Enid
Huddleston, Henry, Blanco
Hughes, Vivian, Milburn
Humes, Otis Lee, Stillwater
Hunter, Pauline, Pawhuska

Jones, Mrs. A. B., Yale Jones, Jeanne, Stillwater Jones, Donna, Stillwater Jones, Velma, Cleveland

Kirk, Addie, Perkins Kirkpatrick, E. G., Stillwater Knight, Myrtle, Stillwater Knight, Lillian, Stillwater

Lewis, C. W., Wakita Lillard, Alice, Pawhuska Lindsey, Stella, Kingfisher Lingenfelter, Emma, Perkins Livesay, Nellie, Pawnee Long, Leona, Stillwater Louisburg, L. L., Hunter Lutz, Learah, Tahlequah

McDonald, Doris, Stillwater McInturff, Florine, Morris McNiel, Vera, Vera McPheeters, T. R., Stillwater McWethy, Faye, Agra

Maxwell, Mrs. H. D., Tulsa Mitchell, Lulu, Stillwater Mitchell, Edith, Stillwater Moore, Esther, Stillwater Moore, Lillian, Cushing Moorman, Helen, Stillwater Morrison, Virginia, Stillwater Morrison, Josephine, Stillwater Mosely, Josie, Stillwater Moser, Anna, Yale Mullen, Donas, Yale Munsell, Melba, Stillwater

Newman, Hazel, Avery Newton, W. S., Stillwater Newton, Edna, Stillwatre Nichols, Vera D., Tulsa Nixson, James G., Ralston O'Keefe, Margie, Stillwater O'Keefe, Lucy, Stillwater

Palk, Annetta, stillwater Payne, Jeannette, Mumall Payne, Zilpha, Stillwater Pebworth, Lillian, Porum Phillipi, Ruth, Rock Port, Missouri

Rader, Sarah, Glencoe
Ralston, Marie, Glencoe
Redding, Lydia, Maramec
Reed, Agnes, Stillwater
Reese, Lula, Stafford, Kansas
Reichman, Maud, Stillwater
Reichman, Mabel, Stillwater
Richard, C. H., Stillwater
Riedemann, Mrs. J. H., Tulsa
Richardson, Florence, Stillwater

Saling, Mrs. Maye, Stillwater
Scanlon, D. F., Hugo
Schooler, Rachel, Glencoe
Scott, Wiley, Carnegie
Scott, Ruth, Yale
Settle, Dorothy, Wynnewood
Shapiro, Anna, Cushing
Shellhammer, Will, Coyle
Sherrard, Lois, Orlando
Sherrard, Lois, Orlando
Sherrard, Dan E., Knoxville, Tennessee
Sikes, Thomas, Stillwater
Sims, Vera, Idabel
Sloan, Susie, Cleveland
Smith, Leila, —pley

Tankersley, Percy, Stillwater Taylor, Edwin, Stillwater Thompson, Cora, Pawnee Thompson, Ruth, Ralston Thoroughman, Dora, Perkins Tolleson, J. W., Stillwater Tourtellotte, E., Stillwater

Vanarsdale, Ruth, Orlando Vaughn, Gertrude, Pawnee Walter, Roy, Elk City Wantland, Fay, Stillwater Ware, Alta, Stillwater Warren, Lucile, Pawnee Wareheim, F. ..., Ingersoll Weatherford, Zella, Bartlesville Weathers, Sydney, Agra Wells, Dora, Chandler Wells, Lola, Pawnee Wheeler, Florence, Pawnee Whipple, Pauline, Stillwater Young, Bessie, Glencoe

Olmstead, Clara, Ripley Orr, Paul F., Lawton

Pitzer, Nellie, Stillwater Pitzer, Sydnie, Stillwater Porter, C. P., Glencoe Powell, Pearle, Ponca City

Riddell, Genevieve, Stillwater Robinson, Eugene, Stillwater Robinson, Amy, Pawnee Robinson, Mary, Pawnee Rogers, Chas., Stillwater Rose, Mamie, Tryon Rossenbach, Ida, Agra Rule, Mrs. Orpha, Orlando Russell, Hariey, Ripley

Smith, Ethel, Carney
Smith, Gertie, Carney
Smith, Grover C., Stillwater
Spelman, Ellen, Stillwater
Spencer, E. L., Stillwater
Spencer, E. L., Stillwater
Spencer, Stillwater
Spencer, Annie, Stillwater
Stockton, Julia, Perkins
Stockton, Maggie, Perkins
Studebaker, Rosa, Stillwater
Swartz, Forrest, Stillwater
Swartz, Forrest, Stillwater
Swartz, Maggie, Meno
Swartz, Bethany, Meno

Triplett, Katherine, Stillwater Truesdell, Josie, Crystal Springs, Florida Tucker, Pansy, Glencoe Tucker, Virgil, tSillwater Tucker, Marion, Stillwater Tucker, Mrs. Alice, Stillwater Turner, Mayme, Scottsville, Kentucky

Vermillion, Rachel, Stillwater Vollmer, Katherine, Stillwater White, Hattie, Stroud White, Loraine, Drumright Wilber, Philip A., Guthrie Williams, Thetis, Columbia, Kentucky Wilson, Maude, Catoosa Witham, Blanche, Stillwater Wolfe, Ida, Pawnee Woodring, Anna, Stillwater Workman, Besse, Ripley Wright, Harley, Cashion

## SUMMARY OF STUDENTS BY CLASSES Session 1916-17

Session 1910-17	
Graduate students	7
Senior class	102
Junior class	68
Sophomore class	157
Freshman class	282
Secondary School	365
Specials	39
Business course	187
Short Course in Practical Agriculture	87
Summer School, 1916	520
Total	1,814
Special School for Boys and Girls at Oklahoma State Fair	147
Total	1,963

## **ALUMNI**

M. J. Oter, '02, President, Stillwater, Oklahoma Harry Johnson, '17, First Vice President, Tulsa, Oklahoma Mathilde McLelland, '14, Second Vice President, Boston, Massachusetts M. F. Mitschrich, '13, Third Vice President, Pittsburgh, Pennsylvania Fearn Hamilton, '13, Secretary, Stillwater, Oklahoma J. T. Horner, '16, Treasurer, Stillwater, Oklahoma

The following is a list of the graduates of the College. In case of change of address, it is especially desired that graduates advise the Registrar of same. The courses from which alumni have received their degrees are indicated as follows:

- I. Agriculture;
- II. Engineering;
- III. General Science;
- IV. Domestic Science and Art;
- V. Science and Literature;
- VI. Teachers Normal Training;
- VII. Commerce and Marketing.

vii. Commerce and Marketing.
Abercrombie, Russell T., I, 1916, Farmer
Lebanon, Indiana Anderson, A. B., II, 1902, A., T. & S. F. Ry. Anderson, A. W., III, 1900, Lawyer. Anderson, P. K., II, 1915, Civil Engineer. Anderson, R. E., V, 1908, Attorney. Andrew, Carl S., I, 1916, Athletic Coach. Andrews, Carl S., I, 1916, Athletic Coach. Andrews, Maud, IV, 1915, Teacher. Idabel, Oklahoma Andrews, Myron, I, 1916, Agriculturist, Connors State School. Warner, Oklahoma Arabajian, H. K., I, 1915, Arakelian Bros. Fruit Company, Box 447.  Fresno, California Atkinson, Mary, III, 1906, Stenographer, Experiment Station. Stillwater, Oklahoma
Baade, H. J., V, 1910, Teacher
Baker, De LaRue, V, 1914, County Agent Tulsa, Oklahoma Ball, H. L., II, 1905, Salesman, Western Electric and Mfg., Co. Rochester, N. Y. Bandel, Maude, IV, 1915, Teaching D. S. in High School Mangum, Oklahoma Barnes H. D., I, 1914, Farmer Bartlett, E. E., V, 1912, Chemist, Glass Factory Sapulpa, Oklahoma Bartlett, E. C., I, 1912, Pine Grove Ranch Rye, Colorado Bass, Lillian, VI, 1915, Teacher in High School Cleveland, Oklahoma

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Rauman Chas V	7 1016 Farmer	Passia Oldahama
(Bellis), Means.	Ida. V. 1914, at home	Tyrone New Mexico
Beck, Paul V., V	, 1916, Superintendent Schools	Devol. Oklahoma
Bennett, Paul, II	, 1908, Commissioner Lights and Water	Stillwater, Oklahoma
Bentley, M. R.,	II, 1909, Farmer	Wichita Falls, Texas
Biggin, Dorothea	, VI, 1916, Teacher	Drumright, Oklahoma
Bilyeu, R. I., V,	1905, Teacher Connors State School of Agric	culture
		Warner, Oklahoma
Blackwell, C. P.,	V, 1911, Instructor in University of Texas	Austin, Texas
Bloom, C. B., II,	1913, Draftsman with C. M. Pritchard	Tulsa, Oklahoma
Dine F P II	, 1909, Bagnell & Hillis Company	42 Yokohama, Japan
Roley A I II	1905, Farmer	Washington D C
Bonar H T II	1913 Westinghouse Flectric and Mfg Com	nany
Donar, 11. 1., 11,	1012 Baltimore avenu	e Kansas City Missouri
Bonar, Mollie, V.	I. 1916. Teacher	Hartshorne, Oklahoma
Boutin, H. C., II	, 1909, Automobile Salesman	Pawhuska, Oklahoma
Bowers, G. W., I	II, 1897, Railway Conductor	Enid, Oklahoma
Bowers, Chas., I,	1913, Teacher in Parish Agricultural School	lGoldonna, Louisiana
Bowers, R. D., I.	11, 1904, Lawyer	Roswell, New Mexico
Boyd, Nina, VI,	1915, Teacher in High School.	Hooker, Oklahoma
Боуа, О. С. 1, 1	110, Graduate Assistant in Botany, Universit	Columbia Missouri
Boydston Ethel	Ida, V, 1914, at home, 1916, Superintendent Schools, 1918, Commissioner Lights and Water II, 1909, Farmer VI, 1916, Teacher 1905, Teacher Connors State School of Agric V, 1911, Instructor in University of Texas 1913, Draftsman with C. M. Pritchard., 1909, Bagnell & Hillis Company 1905, Farmer 1908, Chief Electrician, Navy Yard 1913, Westinghouse Electric and Mfg. Com 1913, Westinghouse Electric and Mfg. Com 1, 1916, Teacher, 1909, Automobile Salesman III, 1897, Railway Conductor 1913, Teacher in Parish Agricultural School II, 1904, Lawyer 1915, Teacher in High School 1017, Teacher in Botany, Universit 1018, Teacher III, 1906, at home	Colbert Oklahema
(Braden) Robert	son, Gertrude, III, 1906, at home	Sapulpa Oklahoma
(Bradwell), Newl	ov. Olive, V. 1909, at home	Mulhall, Oklahoma
Brandon, Edna.	V, 1915, Teacher	Stillwater, Oklahoma
Brannin, Louis, I	, 1914, County Agent	McAlester, Oklahoma
(Bras), Owens, I	Ruth, III, 1907, at home	Okechobee, Florida
(Breidenthal), Co	ppedge, Hazel, VI, 1915, at home	Wellsford, Kansas
Breuer, E. H., Il	, 1911, Treasurer of El Reno Foundry and	Machine Shops
(D : ) D M	37 - 737 4048 . 1	El Reno, Oklahoma
Brian), DeMerri	tt, Naomi, IV, 1915, at nome	Cusning, Okianoma
Bridges, J. W., V	1, 1916, Graduate Assistant, A. and M. Con	Stillwater Oklahoma
Briggs Glen I	1015 Agranamist	Island of Guam
Brishy Cassie K	IV 1915 Teacher	Enid Oklahoma
Brodell, Arthur (	VI. Superintendent City Schools	Ralston, Oklahoma
Broemel, Agnes,	VI. 1915. Student in Art Institute	Chicago, Illinois
(Brooke), Schreit	per, Hazel, V, 1914, at home	Harriston, Virginia
Broom, Rose E.,	V, 1906, Primary Teacher	Howe, Oklahoma
Brower, Laura, I	V, 1916, Teacher Home Economics	Stigler, Oklahoma
Brown, Chas. W.	, III, 1906, Research Assistant in Bacteriol	logy, Michigan Agri-
cultural Col.	lege	East Lansing, Michigan
Brown, C. B., 1,	1915, Assistant, Dry Land Farming, U. S	Cardon City Kansas
Brown I I II	1003	Address Unknown
Brown, Oliver C.	II. 1914. General Electric Company	Schenectady, New York
Browning, I. M.,	I. 1915. Manager of Farm.	Peragold, Arkansas
Buchanan, W. A.	, I, 1912, County Agricultural Agent	Marshalltown, Iowa
Buffington, Betha	IV, 1912, Teacher	Stillwater, Oklahoma
Bullen, B. C., III	I, 1912, Medical Student in College of Phys	sicians and Surgeons
Columbia U	niversity	New York City
Bullen, C. K., II,	1909, Civil Engineer, Hill Oil and Gas Com	panyDepew, Oklahoma
Bullock, Noah P.	TV 1013 Stonographer Brasidant's Office	A and M College
burke, Enzabeth,	IV, 1913, Stenographer, Fresident's Omce,	Stillwater Oklahoma
Burks M P II	1909. Division Engineer Producers Oil Com	manyTulsa. Oklahoma
Burke W I II	1911 Westinghouse Electric and Mfg. Com	pany. Sales Depart-
ment	W	ilkinsburg, Pennsylvania
Burleson, Wm.	L., I, 1905, Associate Professor of Agron	omy, University of
Illinois		Urbana, Illinois
*Burnett, Roy E.	, III, 1905	
Butler, Joe, II,	1915, Rodman and Chainman, Interstate Co	mmerce Commission
920000000000000000000000000000000000000	1915, Teacher in High School 1916, Graduate Assistant in Botany, Universit 1V, 1915, Teacher	Kansas City, Missouri
(1) 111 12	1010 C 1 N	
Camp, W. E., II,	1910, Sales Manager, General Electric Comp	pany
Campball Mile	1910, Sales Manager, General Electric Comp. B., I, 1914, Stock Farm. VI, 1915, Assistant Bacteriologist, State see, Viola, IV, 1913, at home. IV, 1914, at home. L., I, 1916, Teacher of Agriculture	Sacramento, California
Campbell, Milton	N. 1, 1914, Stock Parm	Hoolth Department
Campbell, Rhea,	v1, 1915, Assistant Bacteriologist, State	Guthrie Oklahoma
(Campbell) Sent	e Viola IV 1913 at home	Checotah Oklahoma
Canfield Tesse I	Chemist	Yale Oklahoma
Carney, Zora M	IV. 1914, at home	Rushville, Indiana
Carpenter, Chas.	L., I, 1916, Teacher of Agriculture	Bridgeport, Oklahoma
Carson, Susie S.,	III, 1912, Hardware Business	Perkins, Oklahoma

Carson, Ross L., III, 1907, Hardware BusinessPerkins, Oklahoma
Carter, W. C., II, 1911, Electrical Engineer, Hill Oil and Gas Company
Carson, Ross L., III, 1907, Hardware Business
(Caton) Younge, Orpha, V, 1909, Teaching
Chandler, Emma, IV, 1906, Assistant State Agent, Extension Division, A. and M. College Stillwater, Oklahoma
Steel Company South Bethlehem, Pennsylvania (Chester), Goodwin, Bertha, III, 1907, at home Nevada, Missouri
(Chivington), Tyson, Anna, IV, 1911, at home
Clark, F. J., III, 1908, Office Manager, Book Department, Webb Publishing Company
Clark, C. L., V, 1914
Clausen, Nellie C., IV, 1914, Teacher Domestic Science, Indian School
Clausen, Mrs. B. J., VI, 1912, Care Rush Medical School
Clausen, B. O., II, 1912, Inspector of Gas Engines, U. S. Government.
Clemmer, H. J., I, 1915, U. S. D. A. Woodward, Oklahoma Cloukey, H. U., III, 1909, Chemist, Forest Products Laboratory, U. S. D. A. Madison, Wicconsin
Cobb, A. L., II, 1913, Junior Electrical Engineer, Public Service Commission
Cobb, A. L., II, 1913, Junior Electrical Engineer, Public Service Commission  (Cobb), Payne, Mary, IV, 1913, at home Oklahoma City, Oklahoma  (Coburn, Carroll, II, 1912, Engineer, Switchboard Dept., General Electric Company  Schenectady, New York  Cole, Frank, III, 1906, Solution Foreman, Anaconda Copper Mining Company  Anaconda Montana
Cole, Frank, III, 1906, Solution Foreman, Anaconda Copper Mining Company
Comstock, Harry, II, 1905, Witherbee, Sherman & Company
Conklin, Henry E., II, 1914, Salesman, Westinghouse Electric and Mfg. Company
Cook, H. P., II, 1912, Empoyed by Guthrie Gas Company
Corbin, Bert O., 1916, General Electric CompanySchenectady, New York
*(Cox), Fisher, Mary E., IV, 1913.
Conklin, Henry E., 11, 1914, Salesman, Westinghouse Electric and Mfg. Company Detroit, Michigan Cook, H. P., II, 1912, Empoyed by Guthrie Gas Company Guthrie, Oklahoma Cooley, D. F., VI, 1916, Teacher Cushing, Oklahoma Corbin, Bert O., 1916, General Electric Company. Schenectady, New York Correll, V. I., V, 1912, Superintendent of Schools. Grove, Oklahoma *(Cox), Fisher, Mary E., IV, 1913. Grove, Oklahoma *(Cox), Fisher, Mary E., IV, 1913. Dickens, Texas Crawford, George L., I, 1915, County Agent. Dickens, Texas Crawford, C. W., III, 1909, Food and Drug Inspector, U. S. Customhouse. New Orleans, Louisiana Crocker, Fred, V, 1912, Bacteriologist. Birmingham, Alabama Cummings, Maxie, VI, 1916, Teacher Home Economics. Altus, Oklahoma
Crocker, Fred, V, 1912, Bacteriologist
Dale, E. B., II, 1914, M., K. and T. Ry
Davis, Geo. E., 11, 1916, General Electric Company
Dale, E. B., II, 1914, M., K. and T. Ry
Dolde, W. E., II, 1912 Teacher Manual Training
(Donart), Coffey, Cora M., 111, 1900, at home
*Dorman, W. S., II, 1911.  Doty, Harold, I, 1915, Enid Ice and Fuel Company.  Enid, Oklahoma Dougan, F. F. II, 1907, General Flectric Company.  Pittefield Massachusetts
Drake, T. J., V, 1913, Real Estate Business
Drummond, F. G., V, 1914, Banker, Merchant and Cattleman
Denton, Elizabeth, IV, 1916, Teacher Domestic Science, Connors State School of Agriculture. Warner, Oklahoma Dolde, W. E., II, 1912 Teacher Manual Training. Phoenix, Arizona (Donart), Coffey, Cora M., III, 1900, at home. Lawton, Oklahoma Donart, C. R., III, 1899, County Agent. Oklahoma City, Oklahoma (Donart), Wilcoxon, Gladys K., IV, 1914, at home. Oklahoma City, Oklahoma Dorman, W. S., II, 1911. Oklahoma, W. S., II, 1911. Oklahoma, Enid, Oklahoma Dougan, E. E., II, 1907, General Electric Company. Pittsfield, Massachusetts Drake, T. J., V, 1913, Real Estate Business. Fort Lauderdale, Florida Drummond, A. A., I, 1915, Banker, Merchant and Cattleman. Hominy, Oklahoma Drummond, F. G., V, 1914, Banker, Merchant and Cattleman. Hominy, Oklahoma Duck, T. W., II, 1912, Iron Mountain Ry. Little Rock, Arkansas Duck, F. E., I, 1896, Farmer. Stillwater, Oklahoma Durham, S. B., Dairy Husbandry, Bureau of Animal Industry. Denison, Texas (Dysart), Teter, Minnie, III, 1899, at home. Bristow, Oklahoma
Eads, Velma, IV, 1913, Teacher Home Economics

<sup>\*</sup>Deceased.

190 OKLAHOMA A. & WI. COLLEGE
Eberle, Dovie, III, 1906, Teacher Domestic Science and Arts, University Prepara-
tory School Claremore, Oklahoma
University
(English), Lantz, Maude M., III, 1907, at home
English, Wm. L., 1, 1905, Supervisor of Agriculture for Frisco Lines
University Batch Rouge, Louisiana State University Batch Rouge, Louisiana Elston, W. B., II, 1915, Engineer, Willys-Overland Company Beatrice, Nebraska (English), Lantz, Maude M., III, 1907, at home
Fansher, Ted, I, 1913, Stock Farmer
Fansher, R. A., I, 1912, Stock Farmer
Fellows, Keith, II, 1915, Engineer, U. S. Army
Finch, Laura, IV, 1915, Teacher D. S. and D. A., Oklahoma College for Women
First, Fearn, VI, 1916, Teacher Stillwater, Oklahoma
Fisher, Anna, IV, 1915, Teacher, D. S. in High School
Fisher, J. G., II, 1910, Manager Cotton Plantation
Ford, A. G., III, 1898, Financial Agent
Ford, W. W., II, 1913, Teacher Manual Training
Forrester, D. R., I, 1913, Farmer and Stockman
Broken Arrow, Oklahoma
Francis, Victor, II, 1908, Superintendent Light and Water PlantWagoner, Oklahoma
Freeman, Ray F., I, 1916, Stock Farm
Frensel, H. H., II, 1912, Graduate Student, University of Wisconsin
Friedemann, Theodore, V, 1915, Instructor in Chemistry, Michigan Agricultural
Friedemann, Wm. G., V, 1914, M. S., 1916, Assistant in Chemistry, A. and M.
College Stillwater, Oklahoma Frier, C. H. II. 1911. Milwaukee Electric Light and Railway Company
Milwaukee, Wisconsin
Epperson, Jesse H., V, 1914, City Bacteriologist
Gager, E. H., 11, 1908, Substation Department, Commonwealth-Edison Company  Chicago, Illinois
Gallagher, E. C., II, 1906, Substation Department, Commonwealth-Euslin Company Chicago, Illinois Gallagher, E. C., II, 1909, Physical Director, A. and M. CollegeStillwater, Oklahoma Galyon, E. O., II, 1911, Service Department7712 Brashear, St. Paul, Minnesota Gammie, R. J., II, 1910, Valuation Department, Texas and Pacific Railway Company
Gammie, R. J., II, 1910, Valuation Department, Texas and Pacific Railway Com-
Galyon, E. O., II, 1911, Service Department
Garrett, Emmett L., VI, 1915, Coach in High School
Cetter John J. V. 1014 Science Teacher Connell State School of Agriculture
Getgey, John J., V, 1914, Science Teacher, Connen State School of Agriculture Helena, Oklahoma
Gilbert, N. T., 111, 1898, Banker
Gilmer, T. P., II, 1913, City Mcterman
Gollehon, Floyd, II, 1910, Piano Salesman
Goom, Austin, V, 1912, Military Duty, Fort Logan H. RootsLittle Rock, Arkansas
Gordon, Mae F., IV, 1916, Teacher
Gougler, F. A., I, 1909, Farm Agent
Cashom Ford F. I. 1015 Form Manager Stonewall Oklahama
Graham. Milton C., VI, 1916, County Agent. Little Rock, Arkansas
Graham, Quinton, II, 1914, Engineering Department, Westinghouse Electric Com- panyWilkinsburg, Pennsylvania
Granberry, Carl E., VI, 1914, Medical Student, University of Mississippi Lake, Mississippi
Gravelle, E. E., II, 1913, City Engineer
(Gray), Wood, Mina, IV, 1916, at home
Green, Wm. J., 1916, Assistant Boys Club Agent Stillwater, Oklahoma

Gregory, H. W., I, 1914, Dairy Department, Purdue UniversityLafayette, Indiana Greiner, F. M., III, 1899Brant street, Sixth and Vanburen, Gary, Indiana Griggs, Oscar C., VI, 1915, TeacherSapulpa, Oklahoma Gulck, H. S., II, 1903, Metallurgical Engineer, Moore-Jones Brass and Metal CompanySt. Louis, Missouri Guynn, P. N., II, 1904, Illinois Steel Company
Hagar, Hyral S., V, 1910, Clerk, Extension Division, University of Wyoming
Hagar, Hyral S., V, 1910, Clerk, Extension Division, University of Wyoming  Laramie, Wyoming Hagar, Wm. E., I, 1914, Farmer
Hamilton, F. C., V, 1910, Chemist, Acid Plant, Atlas Powder Company
Hamilton, J. Homer, V, 1910, Student, Harvard Medical School.Boston, Massachusetts Hamilton, Fearn, V, 1913, Teacher, English Department, A. and M. College
Hamon, C. A., II. 1910, Service Department, Westinghouse Electric & Mfg.
Hamilton, F. C., V, 1910, Chemist, Acid Plant, Atlas Powder Company  Hamilton, J. Homer, V, 1910, Student, Harvard Medical School. Boston, Massachusetts Hamilton, Fearn, V, 1913, Teacher, English Department, A. and M. College  Stillwater, Oklahoma Hamon, C. A., II, 1910, Service Department, Westinghouse Electric & Mfg. Company
CompanyOklahoma City, Oklahoma
Hancock, A. V., II, 1907, Manager, Oklahoma office, Southwest General Electric Company  (Company
A. and M. College
Harris, Inez, VI, 1914, Teacher
Hart, Haden, I, 1913, Extension Division
Hartman, T. J., III, 1898, Banker
Harvey, C. F., II, 1911, Consulting Engineer, 2013, Peoples Gas Bldg.
Harvey, J. W., II, 1913, Assistant Professor of Engineering, University of Maine
Harvey, Ruth, VI, 1916, Teacher Devol, Oklahoma Hastings, Alice A., IV, 1905, Teacher, Murray State School of Agriculture.
Hatch, Hazel A., VI, 1916, Teacher. Deer Creek, Oklahoma
Havenstrite, R. W., 1, 1915, Farmer
Hays, Glenn G., VI, 1915, Teacher Waukomis, Oklahoma
Ames, Iowa
Hedger, H. R., I, 1913, Farm Manager
Hemphill, Ora L., II, 1909, Assistant Engineer, Miller Engineering Company
Henderson, Georgia, VI, 1916, Teacher
Henson, Ethel, IV, 1915, Teacher
(Herndon), Herron, May, IV, 1914, at home
Herron, L. G., I, 1913, Horticultural SpecialistAgricultural College, Mississippi
Heston, Adrian, II, 1915, Aviation Corps
Hewett, Norma, IV, 1916, Teacher Home Economics
Hiet Sadie IV 1015 Teacher Agricultural College, Mississippi
Hiet, M. E., II, 1912, General Manager of Firm of Hiet & Son Lela, Oklahoma Hildebrand, L. E., II, 1910, Transformer Engineer, General Electric Company
Hilgenberg, L. W., VI, 1916, Oil Salesman. Pittsfield, Massachusetts
Hartman, T. J., III, 1898, Banker
Hoke, C. E., I. 1907, In Charge of Farm Management Investigations in Oklahoma
Stillwater, Oklahoma

Hoke, H. G., II, 1907, Sales Department, Westinghouse Electric & Mfg. Company Wilkinshurg, Pennsylvania
Hoke, Roda C., IV, 1914, Teacher
Holmes, O. W., I, 1908, Holmes Music Store Stillwater, Oklahoma Holton, Pauline, IV, 1915, Teacher Quinlan, Oklahoma Hoover, G. W., III, 1903, Chemist, U. S. Food and Drug Laboratory.
Hopps, C. W., II, 1911, Public Service Commission, New YorkBrooklyn, New York Horner, John T., VII, 1916, Assistant, School of Commerce and Marketing, A.
Hoke, H. G., II, 1907, Sales Department, Westinghouse Electric & Mfg. Company  Hoke, Roda C., IV, 1914, Teacher
Huffman, Louis D., V. 1914, Real Estate BusinessLima, Ohio Huffnagel, Chas., I, 1913, Instructor in Bacteriology, University of Ohio.
Hunt, Gertrude, III, 1902, Teacher
Ives, F. H., I, 1910, Head Department of Agriculture, Central State Normal School
Jablow, Mrs. Chas., IV, 1915, at home
Jackson, Wm. E., I, 1914, M. S., 1916, Assistant in Entomology, A. and M. College Stillwater, Oklahoma
Jacob, A. W., I, 1913, Teacher Agriculture, High School Marieuter, Maple Lake, Minnesota Jacob, L. O., I, 1913, High School Agricultural Director, Cooperating in Agricultural Extension
Jacobs, Ethelyn, V., 1915, at home
Ives, F. H., I, 1910, Head Department of Agriculture, Central State Normal School
Jessee, W. B., I, 1911, Farmer
Assistant Professor of Horticulture, University
(Johnson), Crosby, Lucy, V, 1912, at home
Jones, S. C., II, 1910, Postgraduate Student, University of Cincinnati
Jones, C. V., 111, 1902, Lawyer
Katz, Henrietta, VI, 1915, Teacher
Kenyon, R. S., II, 1903

Kerr, R. H., III, 1903, Chemist, Bureau of Animal Industry, U. S. D. A.
Kezer, C. L., III, 1901, Teacher
Metallurgy Fort Bliss, Texas
Kile, Eugene, VI, 1915, Frincipal Columbus Ward SchoolOklahoma City, Oklahoma (Kilpatrick), Gregory, May, IV, 1914, at homeLafayette, Indiana Kilpatrick, Earl, I, 1912, Extension Department, University of Arkansas
Kezer, R. H., III, 1903, Chemist, Bureau of Animal Industry, U. S. D. A
(Kirkpatrick), Anderson, Victoria, V, 1910, at home
Kirkpatrick, Cecil, IV, 1909, Professor of D. S., High SchoolChickasha, Oklahoma Knauss, E. J., I. 1905, Druggist
Knoblock, F. L., II, 1912, Architect, Mauer-Knoblock-Simank Company
Knoblock, Cecil C., V, 1915, Station Parasitologist, A. and M. College
Knoblock, F. L., II, 1912, Architect, Mauer-Knoblock-Simank Company
Kooken, E. R., I, 1910, Christian Science PractitionerBellingham, Washington
Kraemer, Marguerite, VI, 1915, Teacher, State University Preparatory School
Krall, J. A., I, 1913, Instructor, Iowa State College
Kratka, Ralph, 111, 1902, Inspiration Con. Copper Company
Krone, Floy C., VI, 1916, Teacher
Lahman, Ruth, V, 1914, at home
Lane, F. P., I, 1913, County AgentNewton, Kansas
Lantz, A. G., II, 1907, Contractor Orland, California
Tacoma, Washington
Krone, Floy C., VI, 1916, Teacher. Chandler, Oklahoma  Lahman, Ruth, V, 1914, at home. Stillwater, Oklahoma  Lahman, W. L., III, 1909, Manager of Ice and Fuel Company. Stillwater Oklahoma  Lane, F. P., I, 1913, County Agent. Newton, Kansas  Lantz, A. G., II, 1907, Contractor Orland, California  Lantz, C. R., II, 1907, Electrical Engineer, Tacoma Drainage Company.  Leichti, H. S., II, 1911. Address Unknown  Leteer, C. R., I, 1908, Department Dry Land Agriculture, U. S. D. A  Lewis, Clarence W., II, 1916, Denver Gas and Electrical Company.
Lewis, Clarence W., II, 1916, Denver Gas and Electrical Company.
Lewis, Arthur C., III, 1901, Assistant State Entomologist
T. ' T. C. T. 1000' O'I D. '
Lewis, L. G., 1, 1896, Oil Business 1 usa, Oklanoma
Lewis, E. G., I, 1896, Oil Business
Chesago Illinois
Lewis, E. G., I, 1896, OH Business. Itulsa, Oklahoma (Lewis, Johnston, Myrtle I., IV, 1910, at home. Tucson, Arizona Lewis, Carrie, III, 1905, Teacher. Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co. Chicago, Illinois Lindsay, R. V., II, 1909, Farmer. Kingfisher, Oklahoma
Lewis, E. G., I, 1896, OH Business. Itusa, Oklahoma (Lewis, Johnston, Myrtle I., IV, 1910, at home. Tucson, Arizona Lewis, Carrie, III, 1905, Teacher. Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co. Chicago, Illinois Lindsay, R. V., II, 1909, Farmer. Kingfisher, Oklahoma (Losey), Barnes, Portia M., IV, 1913, at home. Tucson, Arizona Lognis, Alder H. I. 1916, Taggher Agriculture, High School. Hobert Oklahoma
Lewis, E. G., I, 1896, OH Business. Itulsa, Oklahoma (Lewis, Johnston, Myrtle I., IV, 1910, at home. Tucson, Arizona Lewis, Carrie, III, 1905, Teacher. Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co
Lewis, E. G., I, 1896, OH Business. Itusa, Oklahoma (Lewis, Johnston, Myrtle I., IV, 1910, at home. Tucson, Arizona Lewis, Carrie, III, 1905, Teacher. Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co. Chicago, Illinois Lindsay, R. V., II, 1909, Farmer. Kingfisher, Oklahoma (Losey), Barnes, Portia M., IV, 1913, at home. Kingfisher, Oklahoma (Losey), Barnes, Portia M., IV, 1913, at home. Tucson, Arizona Loomis, Alden H., I, 1916, Teacher Agriculture, High School. Hobart, Oklahoma Lovell, Clemens M., II, 1916, Westinghouse Electric Company.
Lewis, E. G., I, 1896, OH Business. Itusa, Oktanoma (Lewis, Johnston, Myrtle I., IV, 1910, at home. Tucson, Arizona Lewis, Carrie, III, 1905, Teacher. Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co. Chicago, Illinois Lindsay, R. V., II, 1909, Farmer. Kingfisher, Oklahoma (Losey), Barnes, Portia M., IV, 1913, at home. Tucson, Arizona Loomis, Alden H., I, 1916, Teacher Agriculture, High School. Hobart, Oklahoma Lovell, Clemens M., II, 1916, Westinghouse Electric Company. Wilkinsburg, Pennsylvania Lovell, Thomas J., II, 1912, Draftsman, Southern California Edison Company. Lose Angeles, California Lovelt, A. F. I. 1904, County Agriculturist and Agent II. S. D. A.
Lewis, E. G., I, 1896, OH Business. [Lisa, Oklahoma (Lewis), Johnston, Myrtle I., IV, 1910, at home. Tucson, Arizona Lewis, Carrie, III, 1905, Teacher. Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co. Chicago, Illinois Lindsay, R. V., II, 1909, Farmer. Kingfisher, Oklahoma (Losey), Barnes, Portia M., IV, 1913, at home. Tucson, Arizona Loomis, Alden H., I, 1916, Teacher Agriculture, High School. Hobart, Oklahoma Lovell, Clemens M., II, 1916, Westinghouse Electric Company. Wilkinsburg, Pennsylvania Lovell, Thomas J., II, 1912, Draftsman, Southern California Edison Company. Los Angeles, California Lovett, A. E., I, 1904, County Agriculturist and Agent, U. S. D. A. Redmond, Oregon
Lewis, Clarence W., II, 1916, Denver Gas and Electrical Company.  1252 Bannock street, Denver, Colorado Lewis, Arthur C., III, 1901, Assistant State Entomologist.  Atlanta, Georgia Lewis, E. G., I, 1896, Oil Business.  Tulsa, Oklahoma (Lewis), Johnston, Myrtle I., IV, 1910, at home.  Tucson, Arizona Lewis, Carrie, III, 1905, Teacher  Enid, Oklahoma Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co.  Chicago, Illinois Lindsay, R. V., II, 1909, Farmer.  (Losey), Barnes, Portia M., IV, 1913, at home.  Loomis, Alden H., I, 1916, Teacher Agriculture, High School.  Hobart, Oklahoma Lovell, Clemens M., II, 1916, Westinghouse Electric Company.  Lovell, Thomas J., II, 1912, Draftsman, Southern California Edison Company.  Lovett, A. E., I, 1904, County Agriculturist and Agent, U. S. D. A  Redmond, Oregon Lovett, A. L., I, 1908, Entomologist, Oregon Agricultural College.  Corvallis, Oregon Mangum, Oklahoma
Lewis, E. G., I, 1896, OH Business.  (Lewis), Johnston, Myrtle I., IV, 1910, at home.  Tucson, Arizona Lewis, Carrie, III, 1905, Teacher  Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co  Chicago, Illinois Lindsay, R. V., II, 1909, Farmer.  (Losey), Barnes, Portia M., IV, 1913, at home.  Loomis, Alden H., I, 1916, Teacher Agriculture, High School.  Lovell, Clemens M., II, 1916, Westinghouse Electric Company.  Lovell, Thomas J., II, 1912, Draftsman, Southern California Edison Company.  Lovett, A. E., I, 1904, County Agriculturist and Agent, U. S. D. A  Redmond, Oregon Lowery, Phil H., I, 1916, County Agent.  Lovett, A. L., I, 1908, Entomologist, Oregon Agricultural College.  Corvallis, Oregon Lowery, Phil H., I, 1916, County Agent.  Red Oak, Oklahoma Lowman, E. F., V, 1912, Superintendent of Schools.  Red Oak, Oklahoma R
Lewis, E. G., I, 1896, OH Business.  (Lewis), Johnston, Myrtle I., IV, 1910, at home.  Tucson, Arizona Lewis, Carrie, III, 1905, Teacher  Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co  Chicago, Illinois Lindsay, R. V., II, 1909, Farmer.  (Losey), Barnes, Portia M., IV, 1913, at home.  Loomis, Alden H., I, 1916, Teacher Agriculture, High School.  Loomis, Alden H., I, 1916, Westinghouse Electric Company.  Lovell, Clemens M., II, 1916, Westinghouse Electric Company.  Lovell, Thomas J., II, 1912, Draftsman, Southern California Edison Company.  Lovett, A. E., I, 1904, County Agriculturist and Agent, U. S. D. A  Lovett, A. L., I, 1908, Entomologist, Oregon Agricultural College  Corvallis, Oregon Lowery, Phil H., I, 1916, County Agent.  Mangum, Olahoma Lowman, E. F., V, 1912, Superintendent of Schools.  Red Oak, Oklahoma Lowry, C. H., III, 1902, Lawyer.  Stillwater, Oklahoma Lowry, Ultt Ethel IV, 1913 at home.  Pittsburgh, Pennsylvania
Lewis, E. G., I, 1896, OH Business.  (Lewis), Johnston, Myrtle I., IV, 1910, at home.  Tucson, Arizona Lewis, Carrie, III, 1905, Teacher  Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co  Chicago, Illinois Lindsay, R. V., II, 1909, Farmer.  (Losey), Barnes, Portia M., IV, 1913, at home.  Loomis, Alden H., I, 1916, Teacher Agriculture, High School.  Loomis, Alden H., I, 1916, Westinghouse Electric Company.  Lovell, Clemens M., II, 1916, Westinghouse Electric Company.  Lovell, Thomas J., II, 1912, Draftsman, Southern California Edison Company.  Lovett, A. E., I, 1904, County Agriculturist and Agent, U. S. D. A  Redmond, Oregon Lovett, A. L., I, 1908, Entomologist, Oregon Agricultural College  Corvallis, Oregon Lowery, Phil H., I, 1916, County Agent.  Lowery, Phil H., I, 1916, Superintendent of Schools.  Red Oak, Oklahoma Lowry, C. H., III, 1902, Lawyer.  Stillwater, Oklahoma (Lowry), Utt, Ethel, IV, 1913, at home.  Pittsburgh, Pennsylvania
CLewis, L. G., I, 1896, OH Business.  (Lewis, Johnston, Myrtle I., IV, 1910, at home
CLewis, J. Johnston, Myrtle I., IV, 1910, at home.  Tucson, Arizona Lewis, Carrie, III, 1905, Teacher Lincoln, H. J., II, 1903, Machine Shop Foreman, A., T. and S. F. Ry. Co.  Chicago, Illinois Lindsay, R. V., II, 1909, Farmer. (Losey), Barnes, Portia M., IV, 1913, at home.  Loomis, Alden H., I, 1916, Teacher Agriculture, High School. Loomis, Alden H., I, 1916, Westinghouse Electric Company.  Lovell, Clemens M., II, 1912, Draftsman, Southern California Edison Company.  Lovett, A. E., I, 1904, County Agriculturist and Agent, U. S. D. A  Redmond, Oregon Lowery, Phil H., I, 1916, County Agent.  Lowery, Phil H., I, 1916, County Agent.  Lowery, C. H., III, 1902, Lawyer.  Stillwater, Oklahoma Lowry), Utt, Ethel, IV, 1913, at home.  129 East Side Boulevard, Muskogee, Oklahoma (Lowry), Mekee, Theo., III, 1906, at home.  Lowry, Fern, V, 1916, Student Cornell University.  Lincoln, H. W., II, 1912, Substation Operator, Commonwealth-Edison Company.  Chicago Illinois  Chicago Illinois  Chicago, Illi
Lowery, Phil H., I, 1916, County Agent
Lowery, Phil H., I, 1916, County Agent
Lowery, Phil H., I, 1916, County Agent
Lowery, Phil H., I, 1916, County Agent
Lowery, Phil H., I, 1916, County Agent
Lowery, Phil H., I, 1916, County Agent
Lowery, Phil H., I, 1916, County Agent

DOLLAR TI. W. IVI. COLLEGE
McElroy, C. H., I, 1906, Assistant in Bacteriology Department, A. and M. College
McElroy, C. H., I, 1906, Assistant in Bacteriology Department, A. and M. College Stillwater, Oklahoma McIlvain, Chas., I, 1913, Farmer McIntyre, J. C., II, 1911, Instructor in Broadwater County High School. Townsend, Montana McKay, M. B., VI, 1911, Assistant Plant Pathologist, Oregon Agricultural College
McKay, M. B., VI, 1911, Assistant Plant Pathologist, Oregon Agricultural College
McKay, M. B., VI, 1911, Assistant Plant Pathologist, Oregon Agricultural College  Corvallis, Oregon  McLelland, Wm., I, 1914, Farmer
McPheeters, Wm. H., II, 1909, Assistant Professor of Physics Department, Texas A. and M. College College Station, Texas McRevnolds, A. B., III, 1899, Accountant, Southern Pacific Milling Company
McReynolds, S. A., III, 1902, Chemist, 2055 West Adams street
Malone, J. S., I, 1900, Assistant State Agent, Extension Division, A. and M. College Stillwater, Oklahoma
*Mannheimer, Ruth, IV, 1915
Malone, J. S., I, 1900, Assistant State Agent, Extension Division, A. and M. College
Marsh, Walter R., 11, 1916, Western Electric Company
Mayer, Sylvia, IV, 1915, Teacher Domestic Science, High School
Means, P. E., II, 1908, Burro Mountain Copper Company
Melton, W. A., II, 1913, Instructor in Physics, Michigan Agricultural College  East Lansing, Michigan
Merrifield, F. K., I, 1913, Stock Farm, Box 255
Merry, George, V, 1913, M. S., Sci. and Lit., 1915, Chemist, Consumers Refining Company
Meler, Bertha, V. 1906, at home
Miller, Esther C., IV, 1914, Teacher. Stillwater, Oklahoma Miller, Hilma, IV, 1914, High School Teacher. Sipley, Oklahoma Miller, Mayde, IV, 1914, Bookkeeper, 711, Lewis street. San Artonio Teacher.
Miltimore, Cora A., III, 1899, Librarian, Pacific UniversityForest Grove, Oregon Mitchell, Joe, VI, 1915, Principal High SchoolLehigh, Oklahoma Mitchell, L. C., V, 1909, Chemist, Food and Drug Laboratory, Bureau of Chem-
istry, U. S. D. A
Mondy, Beulah, IV, 1916, Teacher Home Economics Hobart, Oklahoma Moore, Mrs. Helen Kyger, VI, 1916, at home. Chicago, Illinois
Moore, J. A., V, 1911, Mountain State 1et, and 1et. Co. Bertyet, Colerado Moore, A. I., II, 1908, Minister. Beggs, Oklahoma Moore, R. H., V, 1908, Student University of Chicago. Chicago, Illinois Moorman, Helen, IV, 1916, Teacher Domestic Science, High School.
Mayall, S. J., II, 1911, Lumber Business
ington Pullman, Washington (Morrison), Harrison, Virginia, VI, 1915, at home, 329 South Sixth street
(Morrison), Berry, Edwina, III, 1907, at home
ington (Morrison), Harrison, Virginia, VI, 1915, at home, 329 South Sixth street

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Morrow, Bertha J., IV, 1914, at home	Broken Arrow, Oklahoma
Mullen, Chyde, I, 1915, Assistant in Agronomy, State Agr	icultural College
Myers, S. E., III, 1899, A., T. and S. F. Ry. Co	Manhattan, Kansas Perry, Oklahoma
Navlor, Harold R., I. 1916, County Agent	Walter, Oklahoma
Naylor, Harold R., I, 1916, County Agent	El Reno, Oklahoma
	Pittsburgh, Pennsylvania
Nellis, H. W., 11, 1912, Government Service	
Nelson, Vinita, IV. 1916. Teacher Home Economics	Eufaula Oklahoma
Nelson, Stella, III, 1903, Druggist.	Washington, D. C.
Nelson, J. A., III, 1905, Physician, No. 1, R street, N. E	Washington, D. C.
Nelson, Cyrus W., III, 1903, Physician and Surgeon	Liberty, Texas
(Newcomb) Crom Bonnie III 1907 at home	Chicago Illinois
(Newman), Frenzel, Iva F., IV, 1912, 537 West Washington	on avenue
Needham, Ollie, II, 1909, Westinghouse Electric and Mfg.  Nellis, H. W., II, 1912, Government Service (Nelson), Chandler, Lila E., III, 1903, at home Nelson, Vinita, IV, 1916, Teacher Home Economics. Nelson, Stella, III, 1903, Druggist. Nelson, J., III, 1905, Physician, No. 1, R street, N. E Nelson, Cyrus W., III, 1903, Physician and Surgeon Nelson, Abigail E., III, 1907, Druggist (Newcomb), Crom, Bonnie, III, 1907, at home (Newman), Frenzel, Iva F., IV, 1912, 537 West Washingto	Madison, Wisconsin
Newman Flanor V 1014 Student University of Missouri	Columbia Missouri
Newman, Leo M., II, 1910, Geologist, Carter Oil Company	Tulsa Oklahoma
(Neilson), Taylor, Mary A., III, 1903, at home	Perry, Oklahoma
North, Esther A., III, 1903, Teacher Home Economics, Co	onnell State School of
Agriculture.	Helena, Oklahoma
North, Kate, IV, 1912, Instructor in H. E., North Dakota A	Fargo North Dakota
*Newland, Mrs. Minnie, V, 1912  Newman, Eleanor, V, 1914, Student, University of Missouri Newman, Leo M., II, 1910, Geologist, Carter Oil Company (Neilson), Taylor, Mary A., III, 1903, at home  North, Esther A., III, 1903, Teacher Home Economics, Conference Agriculture  North, Kate, IV, 1912, Instructor in H. E., North Dakota and Notson, F. Carl, II, 1916, Denver Gas and Electric Company.	nyDenver, Colorado
O'Brien, G. E., I, 1913, State Department of Agriculture Oldham, Albert E., V, 1915, Bacteriologist, State Health I Olentine, Fred B., III, 1906, Physician and Surgeon, St. As	Des Moines, Iowa
Oldham, Albert E., V, 1915, Bacteriologist, State Health I	Department
Olantine Fred B III 1906 Physician and Surgeon St As	nthony's Hospital
	Chicago, Illinois
Olmstead, M. E., V, 1915, Second Lieutenant, U. S. Army Orr, Paul F., V, 1915, Assistant Bacteriologist, City Health	Fort Leavenworth, Kansas Department
Ochorn John II 1006	Address Unknown
(Oschman), Ross, Hattie, III, 1907, at home	Claremore, Oklahoma
Oschman, Maude, V, 1912, High School Teacher	Nowata, Oklahoma
Otey, M. J., V, 1902, Financial Secretary and Purchasing	Agent, Oklahoma A.
Oursler, A. C., I. 1910, President Oursler Bros', Creamery	Oklahoma City, Oklahoma
Oursler, Anna L., V. 1914, Teacher	Arapaho, Oklahoma
Osborn, John, II, 1906 (Oschman), Ross, Hattie, III, 1907, at home Oschman, Maude, V. 1912, High School Teacher Otey, M. J., V, 1902, Financial Secretary and Purchasing and M. College Oursler, A. C., I, 1910, President Oursler Bros'. Creamery Oursler, Anna L., V, 1914, Teacher Oursler, Elizabeth, VI, High School Teacher	New Madrid, Missouri
Painter, Ray H., V, 1912, Assistant Entomologist, Oklahon Patterson, W. H., II, 1915, County Engineer Payne, Wm. F., V, 1915, Digestive Ferments Company Payne, L. F., I, 1912, Instructor in Poultry Husbandry, I tural College (Pearson), Melton, Thirza, IV, 1913, at home Peck, O. T., II, 1908, Book Business Peck, H. L., II, 1915, Book Business Peck, C. P., I, 1914, Book Business Pierson, Jas. W., I, 1916, Farmer and Stockman Pigg, H. F., II, 1902, Electrical Engineer, Witherbee, Sherm Pochall, R. A., II, 1910, Teacher Potts, F. M., I, 1912, Farmer Priest, Stella, V, 1912, at home	na A. and M. College Stillwater, Oklahoma
Patterson, W. H., II, 1915, County Engineer.	Okemah, Oklahoma
Payne, Wm. F., V, 1915, Digestive Ferments Company	Detroit, Michigan
rayne, L. F., 1, 1912, Instructor in Poultry Husbandry,	Massachusetts Agricul-
(Pearson), Melton, Thirza, IV, 1913, at home	East Lansing, Michgan
Peck, O. T., II, 1908, Book Business.	Stillwater, Oklahoma
Peck, H. L., II, 1915, Book Business	Stillwater, Oklahoma
Pierson Ias W I 1916 Farmer and Stockman	Pond Creek Oklahoma
Pigg, H. F., II, 1902, Electrical Engineer, Witherbee, Sherm	an & Company
7 1 11 7 A TT 4040 77 1	Mineville, New York
Potte F M I 1012 Farmer	Devter Michigan
Priest, Stella, V, 1912, at home.	Sabetha, Kansas
Palaist IIIslan IV 1016 at 1	Still-rate Old-1-1
Radnish, Helen, IV, 1916, at home	Clinton Oklahoma
Rapp, C. W., I, 1915, Assistant, Horticultural Department,	A. and M. College
Radnish, Helen, IV, 1916, at home. Ransom, Geo. R., I, 1916, County Agent. Rapp, C. W., I, 1915, Assistant, Horticultural Department, A Ratliff, J. A., I, 1907, Assistant, Experimental Agronomy, U Rector, F. L., V, 1902, Great Bear Spring Company. Reed, Fred A., II, 1911. Reeve, C. T., II, 1907, Electrical Engineer	Iniversity of Nebraska
Rector, F. L., V. 1902, Great Bear Spring Company	Brooklyn, New York
Reed, Fred A., II, 1911	Suttons Bay, Michigan
Reeve, C. T., II, 1907, Electrical Engineer32 Chestnut	street, Cohoes, New York
Reeve, J. R., 11, 1915, Westinghouse Electric and Mig. Co	Mustang Oklahama
*Regnier, C. E., III, 1899	Tustang, Oktanoma
Regnier, M. A., II, 1911	Address Unknown

<sup>\*</sup>Deceased.

Reichman, Elizabeth, V. 1915, Teacher, Public Schools
Reynolds, F. S., I, 1915, Teacher Agriculture
Reynolds, O. H., II, 1914, Draftsman, Union Pacific Ry. CoKansas City, Missouri Rhodes, T. W., II, 1913, General Electric Company, 142 North Ferry street
Richards, Hattie, IV, 1912, High School Teacher Schenectady, New York Reid, Grace, IV, 1913, at home, 1324 North Broadway, Muskogre, Oklahoma
Rhodes, T. W., II, 1913, General Electric Company, 142 North Ferry streef
Robinson, Joe L., I, 1916, Graduate Student, Iowa State College
Rockey, Nellie, VI, 1914, Graduate Assistant, H. E., A. and M. College
Roeser, Harry M., 11, 1914, Bureau of Standards, Department of Commerce
(Rogers), Faulds, Almira, IV, 1910, at home. Wauchula, Florida Rogers, Bertha, I, 1916, at home. Pawhuska, Oklahoma Rose, Rollin M., I, 1915, Teacher. Yale, Oklahoma
Ross, Sam, 11, 1911, Instructor in M. E. and DraftsmanFort Collins, Colorado Ross, J. K., II, 1910, Hardware Merchant
Rudd, E. L., II, 1912, Engineer, Western Electric Company
Russell, Mamie, IV, 1915, Graduate Student Assistant, D. S., A. and M. College
Russell, Carl, I, 1914, County Agent. Ardmore, Oklahoma Ryno, Madeline, IV, 1913, Teacher High School. Stillwater, Oklahoma
Santee, L. A., II, 1913, J. B. Kirk Gas and Smelting Company
Schaefer, Paul, II, 1915, Manager Free State Fair
Schreiber, S. C., I, 1913, Farmer
Scott, Wiley, I, 1915, Teacher Agriculture
Scott, E. M., II, 1913, Commonwealth-Edison Company
Scruggs, P. G., I, 1915, Agriculturist, Cameron State School of Agriculture
Seeger, E. E., 1, 1913, Farmer
Seaper, Nina, IV, 1915, Teacher Islamma Sexauer, Dorothy, IV, 1916, Assistant Home Demonstration Agent
(Semke), Harrington, Grace E., V, 1906, at home
Shallenberger, Garvin, V, 1912, Teacher
Shaw, Ava, IV, 1914, Principal County High School
Shiflett, H. D., I, 1913, Tacher
Shiflett, R. C., 1, 1911, Teacher of Agriculture, Panhandle Agricultural Institute  Goodwell, Oklahoma
Shirty, E. E., VI, 1914, Farmer. Shively, R. Rex, III, 1902, Superintendent Coal Products Company
Short, Robert, I, 1913, County Agent
Scruggs, P. G., I, 1915, Ágriculturist, Cameron State School of Agriculture.  Seeger, E. E., I, 1913, Farmer
Smeltzer, C. E., III, 1902, Physician
Smith, John Graham, I. 1914, Ranchman
Smith, A. Ray, I, 1915, Farmer Haskell, Oklahoma Smith, C. Ray, V, 1910, Real Estate Business Stillwater, Oklahoma

*Smith, S. G., III, 1906
Smith, R. R., V, 1913, Ranchman Newlin, Texas
Snyder, Georgia, IV, 1913, TeacherStillwater, Oklahoma
Spaulding, J. A., I, 1905, Assistant Cashier, Globe Grain and Milling Company
Los Angeles, California
Spaulding, H. B., V, 1910, Medical Student, University of Michigan  Spear, Mary, IV, 1915, Teacher, Oklahoma School for Deaf.  Sulphur, Oklahoma Spear, Maud, II, 1915, at home.  Spear, Maud, II, 1915, at home.  Spencer, E. L., I, 1915, Science Teacher, High School.  Stillwater, Oklahoma Spohn, R. E., II, 1910, Farmer.  Spohn, R. E., II, 1910, Farmer.  Spohn, Carolyn M., IV, 1915, at home.  Spohn, Carolyn M., IV, 1915, at home.  Spohn, Carolyn M., IV, 1915, at home.  Spohn, Carolyn M., IV, 1915, Assistant Bacteriologist, Sanitarium.  Springer, Mamie, V, 1909, at home.  Stalleys, May, VI, 1915, Teacher.  Stallwater, Oklahoma Stansbury, Anna A., V, 1916, Principal Schools.  Lovell, Oklahoma Stebbins, A. A., II, 1909, Postmaster.  Stebbins, R. R., V, 1909, Farmer.  Stevens, H. I., III, 1904, Chemist, St. Louis Surface Paint Company.  Stevens, Margaret M., IV, 1914, Teacher.  Stewart, Jesse, Annabel, V, 1911, at home.  Supply, Oklahoma Stewart, Jesse, Annabel, V, 1911, at home.  Supply, Oklahoma Stewart, F. L., II, 1909, Roxana Petroleum Company.  Stewart, F. L., II, 1909, Bacteriologist, Bureau of Chemistry, U. S. D. A.  Denver, Colorado Stinson, C. C., I, 1914, County Agent.  Ryan, Oklahoma (Stover), Oson, Nanna, V, 1909, at home.  (Stover), Gougler, Ida M., V, 1908, at home.  Swope, H. M., II, 1913, Civil Engineer.  Swope, H. M., II, 1913, Civil Engineer.  Swope, H. M., II, 1913, Civil Engineer.  Soupply, Marshalltown, Iowa
Ann Arbor, Michigan
Spear, Mary, IV, 1915, Teacher, Oklahoma School for DeafSulphur, Oklahoma
Spear, Maud, II, 1915, at home
Spencer, E. L., I, 1915, Science Teacher, High SchoolStillwater, Oklahoma
Spidel, H. M., I, 1910, Farmer Rome, Iowa
Spohn, R. E., 11, 1910, Farmer
Spohn, Carolyn M., IV, 1915, at home
Springer, Mamie, V, 1909, at home
Stallings, Ida, IV, 1915, Assistant Bacteriologist, SanitariumBattle Creek, Michigan
Stanley, May, VI, 1915, Teacher. Stillwater, Oklahoma
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Stebbins, A. A., 11, 1909, Fostillaster
Stephins, R. A., V. 1999, Falinci
Stevens, 11. 1., 111, 1904, Chemist, St. Louis Surface Faint Company
Stewars Margaret M IV 1014 Teacher Stillwater Oklahoma
(Staugert) Jacca Angel V 1011 at home Supply Oklahoma
Stawart R I II 1000 Royana Petroleum Company Tules Oklahoma
Stilla G W III 1000 Racteriologic Ruseau of Chemistry II S D A
Denver Colorado
Stinger C C I 1014 County Agent
(Stayer) Olson Nanna V 1000 at home Cuching Oklahoma
(Staver) Gourder Ida M V 1908 at home Warrenburg Miscouri
Start Chee Gordon II 1016 Sandushy Engine Company Sandushy Chio
Straub Otto I 1010 Dairyman with Polk Sanitary Milk Company
Indiananolis Indiana
Swone H M II 1913 Civil Engineer Shrevenort Louisiana
(Swone) Dolde Emma H III 1898 Panama Anartments Long Reach California
(brope), Bolde, Emilia III, III, 1000, I analia IIparanenonimi Bolde, Cantolina
(Talbot), Buchanan, Gertrude, VI, 1913, at home
Talbot Nora A. VI. 1910. Head of D. A. Department, Oklahoma A. and M. Col-
lege Stillwater Oklahoma
Talket A. F. I. 1012 Health Department Food and Doing Division
Kansas City. Missouri
(Tankersley), McAninch, Lola M., III, 1905, at home
(Tankersley), McAninch, Lola M., III, 1905, at home
(Tankersley), McAninch, Lola M., III, 1905, at home
(Tankersley), McAninch, Lola M., III, 1905, at home
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University Columbia, Missouri Tate, J. A., II, 1909 Madison, Wisconsin Taylor, Inez. IV. 1915, Teacher, Public Schools. Oklahoma City, Oklahoma
Tankersley), McAninch, Lola M., III, 1905, at home Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University Columbia, Missouri Tate, J. A., II, 1909 Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools Oklahoma City, Oklahoma (Taylor), Keith, Iatta, VI, 1916, Teacher Schools Stillwater, Oklahoma
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Columbia, Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma CTaylor), Ellis, leannette, III, 1907, at home. Dresden, Tennessee
Tailot, A. E., I, 1912, Health Department, Food and Dairy Manager Mana
Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma CThatcher). Bost, Jessie O., III, 1897, at home. Alva, Oklahoma
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University Columbia, Missouri Tate, J. A., II, 1909 Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma
Tailot, A. E., I, 1912, Realth Department, Food and Dairy Kansas City, Missouri (Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909 Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, Country Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School.
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909 Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School
(Tankersley), McAninch, Lola M., III, 1905, at home.  Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri  Tate, J. A., II, 1909  Taylor, Inez, IV, 1915, Teacher, Public Schools.  (Taylor), Keith, Jatta, VI, 1916, Teacher.  (Taylor), Keith, Jatta, VI, 1916, Teacher.  (Taylor), Ellis, Jeannette, III, 1907, at home.  (Taylor), Ellis, Jeannette, III, 1907, at home.  (Temming), Casteel, Ruth E., IV, 1912, at home.  (Thatcher), Bost, Jessie O., III, 1897, at home.  Thomas, J. R., I, 1915, County Agent.  Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School.  Thompson, Eugene, I, 1913, Farmer.  Edmond, Oklahoma  Edmond, Oklahoma  Emet. Oklahoma
Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909 Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma (Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Edmond, Oklahoma Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company.
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Stillwater, Oklahoma
Tailot, A. E., I, 1912, Health Department, Food and Dairy Blogsouri  (Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School Edmond, Oklahoma Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri Columbia, Missouri Tate, J. A., II, 1909. Columbia, Misconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, I. W., I, 1904, Buttermaker. 3910 Euclid avenue, Kansas City, Missouri
Talobt, A. E., I, 1912, Realth Department, Food and Dairy Kansas City, Missouri (Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thomberry, J. W., I, 1904, Buttermaker. Astoria, Oregon Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri Columbia, Missouri Luniversity. Columbia, Missouri Tate, J. A., II, 1909. Modison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Eliis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma (Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Edmond, Oklahoma Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Emet, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, J. W., I, 1904, Butternaker. Astoria, Oregon Thornberry, W. T., II, 1903, Contractor. 3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University Columbia, Missouri Tate, J. A., II, 1909 Madison, Misconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School Edmond, Oklahoma Thompson, Eugene, I, 1913, Farmer Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thornberry, W. V., I, 1904, Buttermaker. Astoria, Oregon Thornberry, J. W., I, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri Choroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibotets, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher Holis, Oklahoma Thor, Plass, Oklahoma Tibotets, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher Hollis, Oklahoma Holis, Oklahoma Thor, Plass, Oklahoma Tibotets, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher
Talobt, A. E., I, 1912, Realth Department, Food and Dairy Kansas City, Missouri (Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri Tate, J. A., II, 1909 Columbia, Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1910, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School  Thompson, Eugene, I, 1913, Farmer. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thomberry, I. W., I, 1904, Buttermaker. Astoria, Oregon Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Hollis, Oklahoma City, Oklahoma Cillottson, Bonnie, III, 1909, Teacher. Oklahoma City, Oklahoma
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Sapulpa, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Elmet, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, J. W., I, 1904, Buttermaker. Astoria, Oregon Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., III, 1910. 1003 Arizona Street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Hollis, Oklahoma City, Oklahoma City, Oklahoma Cillottson, A. K., V, 1913, Principal High School. Thomas, Oklahoma City, Oklahoma Tillottson, A. K., V, 1913, Principal High School. Thomas, Oklahoma Oklahoma City, Oklahoma
(Tankersley), McAninch, Lola M., III, 1905, at home.  Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University.  Tate, J. A., II, 1909.  Taylor, Inez, IV, 1915, Teacher, Public Schools.  Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher.  Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher.  Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home.  Tesden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home.  Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home.  Alva, Oklahoma, J. R., I, 1915, County Agent.  Thomas, J. R., I, 1915, County Agent.  Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School.  Thompson, Eugene, I, 1913, Farmer.  Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company.  Thompson, Pauline, IV, 1916, Teacher H. E., High School.  Thornberry, J. W., I, 1904, Buttermaker.  Thornberry, J. W., I, 1904, Buttermaker.  Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home.  Perkins, Oklahoma Tibbetts, F. J., II, 1910.  1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher.  Hollis, Oklahoma Tillottson, Bonnie, III, 1909, Teacher.  Oklahoma Tingle, J. T., I, 1913, Principal High School.  Thomas, Oklahoma Mississippi
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Modison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Eliis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma (Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Emet, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, J. W., I, 1904, Butternaker. Astoria, Oregon Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Oklahoma City, Oklahoma City, Oklahoma City, Oklahoma, City, O
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Sapulpa, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Emet, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, I. W., I, 1904, Buttermaker. Stillwater, Oklahoma Thornberry, W. T., II, 1903, Contractor. 3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Hollis, Oklahoma City, Oklahoma Cit
Tanbot, A. E., I, 1912, Health Department, Food and Dairy Blogsouri (Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thornberry, I. W., I, 1904, Buttermaker. Astoria, Oregon Thornberry, V. V., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Feacher. Hollis, Oklahoma Tillottson, Bonnie, III, 1909, Teacher. Oklahoma City, Oklahoma Tillottson, A. K., V, 1913, Principal High School. Thomas, Oklahoma Tingle, J. T., I, 1915, Farmer Meridian, Mississippi Tongue, G. F., II, 1912, Western Union Telegraph Company. Dallas, Texas Tourtellotte, Evart, I, 1914, Teacher of Agriculture, High School. Denison, Iowa Treeman, Herbert L., II, 1909, Edison Electric Illumination Company.
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri Columbia, Missouri Tate, J. A., II, 1909. Columbia, Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Eliis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Emet, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, J. W., I, 1904, Butternaker. Astoria, Oregon Thornberry, J. W., I, 1904, Butternaker. Astoria, Oregon Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Hollis, Oklahoma City, Oklahoma Tillottson, A. K., V, 1913, Principal High School. Thomas, Oklahoma Tingle, J. T., I, 1915, Farmer. Meridian, Mississippi Tongue, G. F., II, 1912, Western Union Telegraph Company. Dallas, Texas Tourtellotte, Evart, I, 1914, Teacher of Agriculture, High School. Denison, Iowa Treeman, Herbert L., II, 1909, Edison Electric Illumination Company.
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, W. T., II, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Hollis, Oklahoma Tillottson, Bonnie, III, 1909, Teacher. Oklahoma City, Oklahoma City, Oklahoma Tingle, J. T., I, 1915, Farmer. Meridian, Mississippi Tongue, G. F., III, 1912, Western Union Telegraph Company. Meridian, Mississippi Tongue, G. F., II, 1912, Western Union Telegraph Company. Dallas, Texas Tourtellotte, Evart, I, 1914, Teacher of Agriculture, High School. Denison, Iowa Treeman, Herbert L., II, 1909, Edison Electric Illumination Company.
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(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Stillwater, Oklahoma Thornberry, J. W., I, 1904, Buttermaker. Astoria, Oregon Thornberry, J. W., I, 1903, Contractor3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Ticc, Eula, V, 1915, Feacher. Hollis, Oklahoma Tillottson, Bonnie, III, 1909, Teacher. Oklahoma City, Oklahoma Tillottson, A. K., V, 1913, Principal High School. Thompson, Oklahoma City, Oklahoma Tingle, J. T., I, 1915, Farmer. Meridian, Mississippi Tongue, G. F., II, 1912, Western Union Telegraph Company. Dallas, Texas Tourtellotte, Evart, I, 1914, Teacher of Agriculture, High School. Denison, Iowa Treeman, Herbert L., II, 1909, Edison Electric Illumination Company. Treeman, Herbert L., II, 1909, Edison Electric Illumination Company. Stigler, Oklahoma Truner, Homer, V, 1913, Superintendent of Schools. Stigler, Oklahoma Truner, Homer, I, 1915, Teacher. Lawton, Oklahoma Lawton, Oklahoma Truner, Homer, I, 1915, Teacher. Lawton, Oklahoma Lawton, Oklahoma Truner, Homer, I, 1915, Teacher. Lawton, Oklahoma Lawton, Oklahoma Truner, Homer, I, 1915, Teacher. Lawton, Oklahoma Lawton, Oklahoma
(Swope), Dolde, Emma H., III, 1898, Panama Apartments Long Beach, California (Talbot), Buchanan, Gertrude, VI, 1913, at home
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri Columbia, Missouri Tate, J. A., II, 1909. Madison, Wisconsin Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Sapulpa, Oklahoma Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Thompson, Eugene, I, 1913, Farmer. Edmond, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Emet, Oklahoma Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, J. W., I, 1904, Buttermaker. Stillwater, Oklahoma Tibbetts, F. J., II, 1903, Contractor. 3910 Euclid avenue, Kansas City, Missouri (Thoroughman), Williams, Maude, III, 1904, at home. Perkins, Oklahoma Tibbetts, F. J., II, 1910. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Hollis, Oklahoma City,
WHATESULES, I CHIESTIVALIA
(Tankersley), McAninch, Lola M., III, 1905, at home. Stillwater, Oklahoma Tarr, W. A., II, 1904, Assistant Professor of Geology and Mineralogy, Missouri University. Columbia, Missouri Taylor, Inez, IV, 1915, Teacher, Public Schools. Oklahoma City, Oklahoma (Taylor), Keith, Jatta, VI, 1916, Teacher. Stillwater, Oklahoma (Taylor), Ellis, Jeannette, III, 1907, at home. Dresden, Tennessee (Temming), Casteel, Ruth E., IV, 1912, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Sapulpa, Oklahoma (Thatcher), Bost, Jessie O., III, 1897, at home. Alva, Oklahoma (Thomas, J. R., I, 1915, County Agent. Medford, Oklahoma Thomas, Olive B., IV, 1916, Assistant in H. E., Central State Normal School. Edmond, Oklahoma Thompson, Eugene, I, 1913, Farmer. Emet, Oklahoma Thompson, Grady, VII, 1916, Salesman, Bishop Clothing Company. Thompson, Pauline, IV, 1916, Teacher H. E., High School. Chelsea, Oklahoma Thornberry, J. W., I, 1904, Buttermaker. Astoria, Oregon Thornberry, W. T., II, 1904, Buttermaker. Astoria, Oregon Thornberry, W. T., II, 1904, Buttermaker. Perkins, Oklahoma Tibbetts, F. J., III, 1915, Teacher. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. 1003 Arizona street, El Paso, Texas Tice, Eula, V, 1915, Teacher. Oklahoma City, Oklahoma Tillottson, A. K., V, 1913, Principal High School. Thomas, Oklahoma City, Oklahoma Tingle, J. T., I, 1915, Farmer. Meridian, Mississippi Tongue, G. F., II, 1912, Western Union Telegraph Company. Dallas, Texas Tourtellotte, Evart, I, 1914, Teacher of Agriculture, High School. Denison, Iowa Treeman, Herbert L., II, 1909, Edison Electric Illumination Company. New York Trent, Dover, V, 1913, Superintendent of Schools. Stigler, Oklahoma Trueax, C. P., II, 1911, Armour & Co. 9032 Dauphin avenue, Chicago, Illinois Turner, Homer, I, 1915, Teacher. Lawton, Oklahoma Cutt, O. G., II, 1912, Westinghouse Electric and Manufacturing Company. Wilkinsburg, Pennsylvania Wance, Alfred Wm., II, 1916, Westinghouse Machine Company. Wilkinsburg, Pennsylvania

<sup>\*</sup>Deceased.

\*Deceased.

Vance, Leon R., I, 1914, Teacher of Agriculture and Coach Enid, Oklahoma Vandervoort, L. A., II, 1912, Oklahoma Ironworks Tulsa, Oklahoma Venters, H. D., V, 1915, Assistant Bacteriologist, State Board of Health Jacksonville, Florida Varmillion, Rachel, VI, 1916, Teacher Collingsville, Oklahoma Vezey, E. L., II, 1910, Superintendent of Schools Sweeney, Texas
Varmillion, Rachel, VI, 1916, Teacher
Walker, K. D., I, 1913, Farmer.  Walker, Ethel, V, 1902, High School Teacher.  Walker, Ethel, V, 1902, High School Teacher.  Walker, L. E., V, 1914, Teacher.  Walker, Durand, Fay B, III, 1904, at home  Libertyville, Illinois  Walker, Florence K., III, 1903, Stenographer, U. S. Geological Survey.  Washington, D. C.  Walker, Veda, III, 1902, at home  Walker, Belle, III, 1902, at home  Walker, Swinford, Velma, at home  Walters, Julia, IV, 1913.  Walters, Margaret P, IV, 1910, Assistant Librarian, A. and M. College.  Stillwater, Oklahoma  Stillwater, Oklahoma
Walker, Veda, III, 1906, Librarian
Walters, Minnie C., IV, 1910, Head of D. S. and A. Dept, McPherson College
Walters, Margaret P., IV, 1910, Assistant Librarian, A. and M. College  Walters, Margaret P., IV, 1910, Head of D. S. and A. Dept, McPherson College  Ware, Alta, IV, 1915, Teacher
Webb, A. E., I, 1912, Instructor in Agriculture in High School
(Webb), Epperson, Leone M., IV, 1914, at home
Wells, E. E., II, 1913, Draftsman, with C. M. Pritchard. Tulsa, Oklahoma Werner, Ida A., V, 1912, Student, University of Chicago. Chicago, Illinois Wheeler, Birdie, VI, 1916, Teacher. Perry, Oklahoma Whipple, Arthur F., V, 1914, Oil Tester and Gauger, Peerless Refinery.
White, H. H., II, 1913, Transitman, Missouri Pacific Ry. CoLittle Rock, Arkansas Whiteside, E. A., I, 1913, Teacher of Agriculture, High School
Whitlock, Ernest, V, 1914, County Agent. Wewoka, Oklahoma Wiar, Pearl, V, 1907, Traffic Manager, Oklahoma Refining Company. City, Oklahoma Oklahoma City, Oklahoma
Wiener, Lawrence, I, 1915, Dairy Inspector
Webb, Howard F., III, 1914, Bacteriologist, City Department of Health Toledo, Ohio Webb, A. E., I, 1912, Instructor in Agriculture in High School
Wilson, Jas., III, 1906, Associate Professor of Bacteriology, Cornell University
Wilson, Clay E., VI, 1911, Teacher
Wirfs, Clair, IV, 1912, Teacher. Laramie, Wyoming Withers, Clay A., III, 1904, Dentist. 360 North Pennsylvania avenue, Denver Colorado (Wise), Lantz, Mable, IV, 1909, at home. Tacoma, Washington (Wise), Diggs, Blanche, V, 1898, Manager Advance-Democrat Printing Company
Wise, Oscar, I, 1914, Teacher

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Woodson, J. Clay, II, 1915, Westinghouse Electric and Manufacturing Company
Wilkinsburg, Pennsylvania
Woodson, M. M., III, 1902 Fallon, Nevada
Woodworth, L. E., I, 1915, Department Dairy Tests for Wisconsin, care R. T.
Harris Madison, Wisconsin Woodworth, J. E., I, 1905, Field Agent, Bureau of Crop Estimates, U. S. D. A.
Guthrie, Oklahoma
Woodworth, Clyde M., I, 1910, Assistant in Experimental Breeding, University
of Wisconsin Madison, Wisconsin Word, Gurtha, R., V, 1914, High School Teacher Tyrone, Oklahoma
Worthington, W. H., II, 1910, Designing Engineer, Electric Wheel Company, 2030
Spring street
(Wright), Wimer, Louise, VI, 1912, at home Hopsonville, Montana Wishel N W VI 1013 Solicitor Mamaine San Farnando, California
Wright, N. W., VI, 1913, Solicitor Magazine
Wright, H. M., II, 1915
Young, J. E., II, American Steel and Foundry Company
230 Ohio street. Sharon, Pennsylvania
230 Ohio street, Sharon, Pennsylvania Sharon, Pennsylvania
Young, Kenneth R., II, 1914, U. S. Inspector, Mississippi River Commission
Round Lake, Mississippi

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